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MOTOR WORLD

for
DEALERS, JOBBERS AND GARAGEMEN

Vol. LXVIII

New York, U. S. A., Wednesday, July 6, 1921

No. 1

Coming Back!



TRANSPORTATION LIBRARY

Horses Make Poor Showing Against Tractors at Fargo

*Demonstration Proves Time, Labor and Money Saving
Qualities of Power Farming Under Trying Soil Conditions
—Attendance Poor and Later Demonstrations May Be
Abandoned—Motor Car Dealers Making Good as Tractor
Merchants in Northwest*

By DAVID BEECROFT

FARGO, N. D., July 2.

(By telegraph.)

THAT teams made up of six and eight horses cannot compete with farm tractors in plowing was amply demonstrated in three-day test of tractors and horses held six miles from this city in the flat gumbo lands of the Red River Valley this week.

The demonstration was staged primarily by the manufacturers of tractors to get data on what a horse can do compared with what a tractor can do, and forty models of tractors and eleven outfits of horses started in the competition. At the end of the first day three of the horse plowing outfits had withdrawn because of the intense heat and at the end of the third day, when the demonstration was

supposed to be over, only five of the horse teams remained in the competition and are yet unfinished, whereas the tractors finished the work, some of them in one day and all of them in less than two days. Three of the horses have already died from sunstroke and two others may die.

For some time the Horse Association has been rubbing the tractor makers against the grain, endeavoring to establish the fact that you can plow cheaper with horses than with tractors. The demonstration was staged to counteract such propaganda. As the horses have not finished and may not finish for several days more, no official report has yet been compiled and the official results will not be known until near the middle of July.

WHILE figures are not yet ready, the general results as observed by three days at the demonstration are convincing enough. The demonstration was participated in by forty tractors, each having to plow a 10-acre plot and then prepare it for seeding by cultivating it with disk harrows and toothed harrows and finally draw a seed drill over it, although no seed was sown. Each of the horse outfits was given the same task.

The tractors were of all sizes, two, three, four, six and eight plow types. All of the leading tractor makers except Samson and Moline competed. There were 26 different makes of tractors, which is a relatively small number compared with nearly 60 makes that competed a year ago and two years ago in the demonstrations. All of the well established firms competed, including such as Fordson, Case, Wallis, Avery, Twin City, Rumely, Hart-Parr, International Harvester, Allis-Chalmers, Bates, Cletrac, Holt, Best, Emerson-Brantingham, Fox, Liberty and Waterloo Boy.

The soil to be plowed was dead level black gumbo, covered with woods waist high. The ground was hard and the weather excessively hot. The tractors were started at 8 o'clock in the morning and excepting an hour for lunch worked continuously until 7 o'clock at night. It was the first time tractors

have ever been given such a long test in an American demonstration.

There was an observer on every tractor who recorded stops and measured the amount of gasoline or kerosene used, the time needed and amount of water used for radiator and for mixing with the fuel. An effort was made to get the cost of the grain, hay, etc., needed by the horses.

The outstanding lesson of the demonstration in the absence of the official report is that the greatest advantage of the tractor lies in its ability to do work in the hottest weather when it is too hot for horses and also in that a man with a tractor can accomplish four or five times as much as he can with horses, depending on the size of the tractor and the number of plows it pulls.

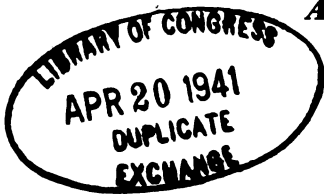
Some of the biggest tractors, pulling eight and six plows, had the 10 acres plowed and fitted early in the afternoon of the first day. The Aultman-Taylor, with eight plows, plowed the 10 acres in 4 hours and 30 minutes. The Avery, with eight plows, did it in slightly less than this. The Twin-City 20-35 model, with six plows and handled by one man, did the work in practically the same time.

Smaller types of tractors like the Cletrac, with three plows, and generally expected to plow at the rate of an acre an hour, did better than horses and had

the 10 acres plowed before the day was over, this notwithstanding the bad condition of the ground, which made the plows clog up so that they had to be washed off with water on the mold boards at each end of the field. Two-plow tractors like the Fordson did not finish the 10 acres in the first day, having a little left for the second day.

With a six-plow tractor one man can plow 25 acres per day whereas that same man driving a six-horse team can scarcely plow five acres per day. This, multiplying as high as five-fold the working capacity of the man, is the greatest lesson of the demonstration, particularly when farmers are short of help and are endeavoring to do the most of the work themselves.

The amount of fuel used by the tractors will be given in the official report but unofficial figures showed that while some of the older designs of tractors took more than four gallons of kerosene per acre, some of the newer four cylinder engine designs took but two and a half gallons and a few came very close to using but two gallons per acre. The fuel consumption was a little higher than usual, due to the many stops to clean the plows. One tractor that had four hours and a half to plow the 10 acres stopped 84 minutes for the plows. This increased the fuel consumption. A great many of the machines used kerosene, the



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others gasoline. There was a goodly representation of the creeper types, such as Cletrac, Bates, Best and Holt. A few other creeper types are being developed at this time by some of the other makers.

The psychology of holding a demonstration in North Dakota at this time of the year was primarily to show the value of the tractor for summer fallowing land, that is, plowing and cultivating land that is not growing any crop this year but which will be sown with wheat next spring. To get best results the land should be plowed in the hot weather of June or July, when it is too hot for horses, but ideal for tractors. The case is similar to the winter wheat area of Kansas where to get the best yield of wheat per acre the plowing should be done in the hot days of late July and early August. In every section of the country there exists a similar reason for tractor plowing and it is only when these real reasons are understood that the farmer grasps why a tractor is more valuable.

The United States Department of Agriculture has recently compiled most valuable figures on what a tractor can do and at what cost. In a report based on the use of tractors on 286 farms in the States of Illinois, Indiana and Ohio the report gave \$18 per day to plow for a 10-hour day with a three-plow tractor and approximately \$13 per day with a two-plow tractor. Those comparing the cost of plowing with horses and a tractor are apt to forget that the Government estimates it costs \$159 per year to keep a horse, this covering food, depreciation, interest, etc. It should also be borne in mind while the average tractor on an Illinois or Indiana farm works about 31 days per year the horse on the same farm only averages 60 days per year.

The capacity of a tractor to perform a big share of the farmer's work is shown by other Government figures, which show that a three-plow tractor plows 80 per cent of spring plowing and 93 per cent of fall plowing and with a two-plow machine it plows 83 per cent of spring plowing and 88 per cent of fall plowing. These figures are a complete answer to the question as to how much of such farm work the tractor can really accomplish.

The demonstration here this week was poorly attended, not over 10,000 farmers attending the second or largest day. From the standpoint of attendance the demonstration was a complete failure. No reason can be given for the small attendance other than that the farmers all know that a tractor will plow and the novelty of watching a Fordson or Cletrac has worn off. They came in tens of thousands a few years ago to see them but scarcely came in hundreds this year. Because of the poor attendance it is not certain whether the two other demonstrations scheduled will be held.

The number of motor car dealers selling tractors in North Dakota is gaining rapidly. One tractor maker building one of the best machines on the market said yesterday that 80 per cent of his dealers in this territory sell automobiles and ac-

cessories. Many of these dealers attended the demonstrations.

The motor car dealer is making good in selling tractors. Some of the tractor makers are giving 25 and as high as 28 per cent discount. Many tractor manufacturers are looking for good motor car dealers to serve as tractor dealers and are not requiring that they give up any car agency when they take on the tractor.

Dealers and Manufacturers Near New Relation Basis

DETROIT, July 1—Efforts looking to the establishment of close co-operation between factory executives and dealers are beginning to breed results. Committees representing the National Automobile Chamber of Commerce and the National Automobile Dealers Association expressed themselves highly pleased with the results of their second conference held at the Detroit Athletic Club yesterday. The conference was continued to July 12, when the committee will meet in Buffalo.

A formal draft of the position of dealers on matters under discussion will be presented at the Buffalo meeting by Harry G. Moock, general manager of the dealers' association. Following yesterday's meeting he expressed confidence that action favorable to the industry generally would be taken at that time.

Developments at yesterday's meeting were practical agreements to the effect that cancellations of contract in the future shall be only on recognized factory authority rather than at the hands of various persons, as now is possible. That persons suffering cancellations should have opportunity for appeal, also seemed to carry weight with many of the conferees. There also seemed to be unanimity of opinion that contracts should be made dependent on performance rather than subject to renewal at definite dates.

The question of the disposition of cars in cases of contract cancellation brought forth considerable discussion, but no definite action was indicated.

General Manager Alfred Reeves of the N. A. C. C. expressed gratification after the meeting at the harmony which characterized the proceedings, and said it gave assurance that all problems now being threshed out would be settled to the satisfaction of dealers and manufacturers, and for the good of the industry.

Packard Prices Reduced

DETROIT, July 1—Price reductions have been made by Packard Motor Car Co. on all twin-six models, both open and enclosed; on all enclosed models of the single-six line, and on all trucks. Twin-six open cars are reduced \$1,150, approximately 19 per cent, and the same percentage is cut on enclosed cars. The

The sale of motor cars was stimulated in this city following price reductions, some of the dealers having sold more cars since price reductions were made in June than they sold all the rest of the year up to June 1. Ford has had a bigger year in this territory this season than last. The accessory jobbing business has been at 75 per cent of last year's while the general repair business has been heavy.

single-six sedan is reduced \$400 and coupe \$275. On trucks, model EC is reduced from \$3,700 to \$3,500, ED from \$4,450 to \$4,100, EF from \$5,550 to \$4,500 and EX from \$4,200 to \$4,000.

FARM TRUCK MARKET OFFERS POSSIBILITIES

NEW YORK, July 1—The truck committee of the National Automobile Chamber of Commerce has completed its survey of motor trucks in use on farms in the States of Rhode Island, Maryland and Pennsylvania. The data shows that in Pennsylvania on 186,863 farms, only 12,631 trucks are in use and that there are only 11 counties in which there is no need for more trucks. Smaller sizes are preferred. In Maryland there are only 2817 farmers who use trucks. Most of them are of the 1-ton variety. It is evident that motor vehicles are popular in Rhode Island, because 1350 of them are in use on 3500 farms in Providence and Newport counties. It is stated that additional trucks are needed in Providence County but not in Newport.

Wolverine Truck Company

DETROIT, July 1—In conjunction with the announcement of a new line of trucks, the American Commercial Car Co., manufacturer of the Wolverine truck, has reduced prices on the entire line from \$50 to \$115. The new line will take the place of the former models, and while substantially the same, will embrace new and distinctive features. The new prices are: 1 ton, \$2,125, formerly \$2,240; 1½ ton, \$2,375, was \$2,465; 2 ton, \$2,640, was \$2,750; 2½ ton, \$3,425, was \$3,475, and 3½ ton, \$4,100, was \$4,150.

Westcott Pays Dividend

SPRINGFIELD, OHIO, June 30—Directors of the Westcott Motor Car Co. and the H. G. Root Co., automobile supplies, have authorized the payment of the regular quarterly dividend of 2 per cent on the preferred stock payable June 30. H. G. Root, president of the Root Co. and general manager and treasurer of the Westcott company, states that June business has been surprisingly good and much better than had been expected.

How to Get MEN *and* How to Get RESULTS

A Story of Two Dealers in Two Cities

THIS is a story of two dealers.

Both are getting results—sales results and profit results—because both have good men. *And both have good men because of their rewards for service.*

In this story one tells how he gets men, while the other tells how he gets results.

The first dealer is Warner M. Bateman of Cleveland, who sells the Reo car and truck.

The second dealer is Frank Hatfield of Indianapolis, who sells the Ford car, truck and tractor.

Here are their stories, worth the attention of every member of the trade.

How to Get Men

BATEMAN, who says selecting salesmen is a most important detail for the automobile dealer, goes about building up a sales organization in this way:

First, he says frankly that he cannot tell a good salesman when he first sees and talks with him. Many times the most prepossessing applicant turns out to be a "flivver," and the man who makes the poorest impression at the start frequently turns out to be a "crackerjack."

The art of picking capable salesmen merely consists of giving a man a fair chance to make good. "And by a fair chance," says Bateman, "I mean that a man ought to show some indications of what is in him immediately. The first month may not tell all of the tale, for his record in that length of time undoubtedly will not equal that of the best men on the staff, but you ought to be able to size up a man pretty well in the first 30 days. After that size-up it is not only a reckless waste of time but bad policy to retain a man who does not measure up. And in this 30 days' period I always ascertain whether the man is a pessimist or an optimist, and if the former he goes, for his influence affects the other salesmen and it helps demoralize them. Usually a pessimist will create dissension in the ranks of salesmen."

"In building up a sales force, one of the first things I ascertain is the amount of money per year that an applicant wants to earn. We get just about what we want in this world, and the salesman or dealer who doesn't succeed doesn't want success hard enough. So if an applicant tells me he hopes to make \$25 a week as a member of my selling organization, I bid him good day and take up my time with more remunerative subjects. If a man comes in and asks what the chances are for making \$10,000 a year as a salesman for me, I pick up my ears and try to find out just how hard he is willing to work in order to earn

\$10,000; how many sacrifices he will make; how many times he is willing to be late for lunch and dinner; how many nights in the week he is willing to stay

Read How He Gets His Men— and Why They Stay



WARNER M. BATEMAN
of Cleveland

out late talking to prospects if necessary to make that \$10,000. If he measures up in his answers and shows stuff in the probationary period, then that salesman is mine for keeps. The proper kind of a desire for money—big money—puts pep in a salesman.

"Another important thing to do in building up a selling force is not to overburden the staff. Some dealers make the mistake of putting on so many salesmen that no one makes a high salary, and all earn but a moderate compensation. When that happens, the crackerjack salesmen quit and the poor men hang on. Good-bye for that dealer in a few months.

"There's nothing like a bonus plan to build up a sales organization and to hold good men. The bonus inspires the salesman with two objects: first to make a sale and then to increase the volume of sales. A man who has a bonus on sales that is payable the end of the year is not so likely to quit work at the end of 6 months' work as the man who is not given a bonus. And by all means make the bonus payable at the end of the year."

The Bateman bonus runs from 5 to 25 per cent of the yearly sales of each salesman, according to his volume of sales. The higher the value of sales the larger the bonus. That stimulates continuous effort, and thereby eliminates a condition that confronts so many dealers.

How to Get Results

AUTOMOBILES are merchandise and should be sold just as other merchandise is sold, in the opinion of Frank Hatfield, head of the Frank Hatfield Co., of Indianapolis.

Here is one of the secrets of Hatfield's success. When he feels that new ideas would stimulate sales and he can't think

of those elusive ideas just at that time, he makes a little trip to the retail district downtown and does some investigating on his own hook. In the realm of the retail stores, he says, there are numerous ideas that can be incorporated with profit in selling automobiles.

For example, it was a trip to the re-

tail district that convinced Hatfield that the one sure way to get maximum efficiency out of salesmen was on a commission basis. He made investigations in the downtown department stores and learned that in many departments the system was being tried with success. He learned from some of the biggest shoe retailers in the city that the system was being used almost exclusively and was a pronounced success. In March he instituted the commission basis of payment in both the new and used car departments, and in spite of the fact that the salesmen believed they could not live, the salaries jumped in some cases as high as 400 per cent.

The commission plan does not end with the sale of the car, but extends into the jobs of paint sold and the accessory departments. The commissions vary, of course, depending upon whether the sale is a new job, a used car or an accessory, but the principle is the same throughout.

Before March the salesmen used to get from \$40 to \$50 a week and in some cases slightly more, with a car and its upkeep. When the announcement was made of the change some of the men threw up their hands and said they could not live. The drawing account was made very low—not enough to live on—which was what the company wanted. They wanted a salary guarantee so low that the man would have to get out and do business or get out of the way of men who did want to make a good living. A commission of 5 per cent is allowed on new cars and the result is that salesmen who formerly made \$200 a month are making \$600 and some are even going stronger.

The commission is not paid until the car is delivered. This may sound unfair, but here is the line of reasoning. It used to be that when the sale was made and the deposit paid the salesman promptly forgot that sale. Now, he is anxious to get that car delivered. When a car for Mr. Jones arrives at the plant now, the salesman immediately takes a personal interest in Mr. Jones until he has driven from the plant. Service generally is increased by such an arrangement.

With used cars the same fundamental rules apply. One of the prize departments of the plant is the used car department. Hatfield says under his company's system the used car department is a joy instead of a source of complaint. Only one man sells in the used car department. He is personally acquainted with every car that is brought in. Either Hatfield or J. W. Trout, general manager of the plant, appraises the car. The salesman knows every knock in the motor, the faults of the rear system, and he is under instructions to point out any faults that might be found to the prospective buyer. And here is a little secret. The salesman finds out the occupation of the prospect. If the man is a mechanic—a man who is likely to spend a lot of time on Saturday and Sunday and holidays tinkering with the car—the salesman uses all his persuasive powers to sell him an older model, or one that will require some attention. In the first place such a model more than likely will fit the prospect's pocketbook, and in the

second place he will build up the car to a point of efficiency where it will suit his needs admirably. In the case of a salaried man or a professional man who wants a "hack" car, he is shown some of the later models or a car that is in

cess is that of pushing various parts and accessories by weeks. For instance, this week will be cord tire week, next will be Decker wheel week, the next may be spark plug week and so on. Hatfield believes in suggestion as a valuable

Two Reasons Why Frank Hatfield Gets Results



1—The Hatfield "family" gets results for Hatfield because at the same time it is getting results for itself—commissions are paid not only on car, truck and tractor sales, but on sales of parts, accessories, paint jobs, etc. 2—Part of Hatfield's result-getting equipment. Accessories are DISPLAYED next to the parts department and one helps sell the other

good shape, for if, even at a much lower price, such a man were sold a car that required a good bit of attention, he would swear that he was "stung" on the bargain. The salesmen in the new car department are mighty anxious to further the used car department's business even if they do not get a share of the commission. They know if a man buys a used car the rule is that in about a year he comes back to trade the car in for a new one.

Another merchandising idea being tried out with more than average suc-

asset in merchandising. Everybody from salesman down to the workman is schooled in suggestion. Say this happens to be cord tire week. A cord tire is in the window, another is placed on the show case in the accessory department, another is put on the counter of the parts department, one is put on the second floor and in other strategic places. Everybody in the department knows the make of tires handled, at least the salient selling points, and above all the prices for the more stand-

(Continued on page 38)

Service Diary Directs Resale Effort of This Truck Dealer

Card Index of Service Department Jobs Points Out High Maintenance Jobs—Provides Replacement Sales Prospects and Enables Dealer to Intelligently Handle Service Complaints

USE of the records of the service department to foster owner satisfaction and to point out prospects for replacement sales is a unique feature of a system of repair records that has been developed by the Autocar Sales & Service Co., Inc., New York City. This company keeps what amounts to a complete diary of each truck in the territory. The value of this system may be judged from the

following important uses to which it is put:

- 1—It points out the owner whose maintenance expense is too high.
- 2—It provides prospects for replacement sales.
- 3—It makes all the information needed in the handling of service complaints readily available.
- 4—It prevents duplication in billing.

EACH car in the territory has a repair record form similar to the one illustrated. This form is filled in as soon as the truck is delivered. It is then filed in a vertical loose-leaf binder which is

carried in a light stand mounted on castors. Every time a truck comes into the service station a notation is made on the repair record of what was done to it. Each morning the service manager re-

ceives a report of the work received the preceding day. Suppose that J. Smith's truck has come in and the work on it is covered by Repair Order No. 113. The clerk in charge of the repair record file makes a notation of the order number in pencil on the repair record covering this truck. When the job is completed and all the information required for billing has been received by the office, the job is billed and the complete information relative to that particular job entered on the repair record form. Every time the truck comes into the service station this process is repeated.

By reference to the illustration, it will be seen that the repair record furnishes a completely itemized list of all service performed on each car in the territory. Not only is the work described, but the order and invoice numbers, and the costs are given. If more detailed information is required, a supplementary file is maintained in which there is a folder for each truck. This file is arranged in accordance with the truck numbers so that if the ownership of the truck changes it is simply necessary to change the name of the owner. In these folders are filed all papers regarding the truck covered by the folder number, such as repair orders, parts requisitions, inspection reports, credits and letters.

The signal at the top of the form singles out those trucks on which the expenditures have been unusually heavy. It is moved to the right as the total money spent on the truck increases.

New forms are made out for all trucks in the territory at the beginning of the year. The total for the previous year is carried forward, but is not included in the total for the current year. A separate binder is provided for the records of each year.

The usefulness of this system of repair records can hardly be over-estimated. Take the case of the owner

Look—Can You Use a Service Diary Like This?

THE AUTOCAR SALES AND SERVICE CO., Inc.
SERVICE DEPT., N. Y.
REPAIR RECORD

OWNER J. Smith,
ADDRESS 10 E 10th St
CITY New York.

BUSINESS EXPENSE
CAR NO. 64397
MOTOR NO 108829
DELIVERY DATE: 8/26/18

DATE	DESCRIPTION OF WORK	LABOR	MATERIAL	EXPENSE TAX	TOTAL
1/28	Brought forward from 1920 Car Record				22.68
2/8	Overhauled gearshift connections. Ained up gears. Overhauled				
2/12	bumper. Applied spring bolts to R.H. rear spring. Applied set				
	of coal type springs. Tightened connecting rod bearings.				
	Ground valves. Cleaned carbon.				
	Inv. R 20799	55.6 hrs.	69.50		
	R.O. R 113		90.84		
			3.40		
					163.44
5/9	DAMAGES DUE TO ACCIDENT				
5/9	Applied 2 new front presto lamp brackets. Straightened front				
5/24	section of seat structure. Applied 2 new lamps.				
	Inv. R 24080	2.2 hrs.	2.70		
	R.O. R 2725		14.84		
			.56		
					18.25
5/9	DAMAGES DUE TO ACCIDENT				
5/9	Applied new R.H. front fender and new horn. (Applied R.H.F.				
5/17	service service wheel)				
	Inv. R 24080	3.5 hrs.	4.13		
	R.O. R 2717		15.91		
			.52		
					18.56
6/3	Removed R.H. from wheel & applied owners. Adjusted carterator.				
6/4	Inv. R 24395	.9 hrs.	1.13		
6/4	R.O. R 3375				
					1.13
					201.39

A card like the one shown here is kept by the Autocar Sales & Service Co., Inc., New York, on every car in the territory. It helps to point out high maintenance cost of owners, facilitates successful handling of service complaints, prevents duplication in billing and PROVIDES PROSPECTS FOR REPLACEMENT SALES. Study it!

whose driver is careless about maintaining the truck, and as a result the truck is constantly coming into the service station for small repairs and adjustments. The case of the individual job is small, but the aggregate, when the truck comes in frequently, is quite large. This owner is getting a good start towards being dissatisfied. His truck is out of service more than it should be and his maintenance costs are excessive.

The repair record gives the service manager a tip to investigate the cause of this owner's troubles. An inspection of the truck is made at once, which is used as the basis of recommendations that are made to the owner as to how he can reduce his maintenance costs. As a result incipient dissatisfaction is nipped in the bud. The owner is kept sold on the truck.

The service department becomes a source of names for the prospect file through watching the repair record file.

Inspection may show that a truck that has come in for repairs will require an expensive overhaul job to put it in good condition. Reference to the repair record for that truck shows the age of that truck and how much money has been spent on it. If the service manager considers that there is a good opportunity to trade in the old truck, he notifies the sales department of the conditions.

Having the information regarding each truck segregated, as it is on the repair record form, simplifies the handling of complaints on bills. When an irate owner phones in about what he considers to be an excessive charge, the service manager pulls the stand carrying the repair record binder over to his desk and determines immediately what work was done and how much was charged for it. If he requires further information he has the folder bearing the number of the truck owned by this man brought to him. With this infor-

mation in front of him, the service manager can discuss the job intelligently. If the conversation is about a job that has not been completed, the pencil notation of the repair order number is on the record so that this information can be secured readily.

In order to prevent duplication, all bills are checked against the repair record. The billing is done at the same time the entries are made on the repair record forms. It is consequently impossible for duplicate invoices to be made out.

The Autocar Sales & Service Co. has found the segregation of service data in this manner of inestimable value in keeping owners sold on their trucks and in making replacement sales. The operation of the system does not involve much work and the forms and binders are inexpensive. It is a small price to pay for what every truck dealer must have to be successful against present day competition.

"As Others See Us"

ACCESSORY Trade in the U. S. A., some impressions of a lightning business trip that should prove of value and interest to traders. A crowded month of ceaseless activity has just been completed by Mr. J. W. Pickavant, of Pickavant & Co. of Birmingham, and Mr. Lawrence C. Hill, of the County Chemical Co. These two well-known members of the trade are back again in England from a business trip to the States, and their experiences have provided them with a mine of knowledge concerning the accessory trade "over there."

Starting from Liverpool on December 29, they managed to cover about 10,000 miles, and be back home again by the end of January. By traveling all night during their stay they visited in the daytime numerous business organizations, taking in their stride several of the largest American cities, and many railway journeys, including one of 1600 miles.

New York and the great Motor Show held them for four days, and then, having observed and memorized everything of note in the city, from the Woolworth building, with its 70 floors, to the Bowery, that neighborhood of shadowy happenings, they passed on to Indianapolis. Here the works where is produced the Hassler shock absorber, for which Pickavant & Co. act as sole concessionaires, was the main objective. Full of admiration for the whole-hearted methods employed in this factory, the pair left for Philadelphia, and thence to Chicago. One street in this city, Michigan Avenue, extends for no less than fifteen miles, five miles of which (called Auto Row) is taken up by motor showrooms! Great Portland Street and Long Acre, the Mecca of British Motordom, seem to pale into insignificance in face of such a display; but when it is remembered that one American in every five is a car owner, wonder gives place to some slight amount of understanding.

Returning via Niagara, Newark, New Jersey, and New York, visiting car and accessory manufacturers en route, Port-

land was at length reached, where the boat for home allowed breathing space for the first time.

Business Prospects

Traders in this country will be gratified to learn that, as far as America is concerned, the slump is over, for whether it be a wave of heat or cold, of unrest or prosperity, it invariably reaches these shores very soon after being felt on the other side.

"Every American business man is both optimistic and confident for the future," Mr. Pickavant declared on his return, laughingly adding: "Instead of talking of shorter hours, one section of the workers threaten to strike if they are not allowed to work an additional hour each day." Not only is production being kept up to the mark, but a steady demand is being created and maintained by clever salesmanship and its twin sister—efficient advertising. Everyone is ambitious: the American accessory manufacturer, instead of grouching about shortage of trade, gets busy, goes out and *makes* trade. They all believe in striving, without class distinction, for prosperity, and no doubts are apparent as to trade being really good in the immediate future.

American Methods

The returned travelers had much to say as regards the American accessory trade. The manufacturer over there leaves nothing to chance; instead of producing an article and offering it to the trade, he immediately attempts the creation of a public demand, and by extensive advertising brings the consumer into the trader's showrooms. But even before an article is widely advertised, the American retailer never exhibits any reluctance to give a good article a fair trial. In this country both the factor and agent often require a great deal of persuasion to stock a new line, and in many instances it is really disheartening to find the lack of interest and business acumen that the retailer displays in selling ac-

cessories. The American garage man is essentially a salesman; he realizes that all is grist that comes to the mill. If he can make a profit out of an accessory, he stocks it, and pushes it upon every opportunity; as a result accessories of every conceivable type are to be found upon all classes of cars; even the lowest priced vehicles carry shock absorbers, spotlights, stepmats, etc. Owing to the persistent salesmanship of the garage man, the owner-driver will buy anything and everything that will add to the comfort or efficiency of his mount. Real service is another point in which the Yankee garage excels. The sign "Garage and Car Laundry" is a common sight. When a driver stops for fuel or lubricant, the mechanics will invariably fill up his radiator and give the car a "wash and brush up" free of charge; meanwhile the salesman of the establishment is conducting the car owner round his showroom, and, in all probability, making a sale of some new accessory. Methods such as these go to show that a great deal might be done by traders here to give a decided fillip to present-day trade. Both Mr. Pickavant and Mr. Hill were loud in their praises of American hospitality, and the opportunities afforded them for studying the trade in general from all its aspects at the many places at which they called. Space will not permit of further details being given, but both the gentlemen in question wish to send a message of confidence to all readers of "The Trader." They assert, with convincing optimism, that trade in 1921 is going to be really good.

"In the Hassler shock absorber alone we hope to do a huge turnover," said Mr. Pickavant: "we are going to create a consumer demand for this, and for our lines for Ford cars, by intensive advertising, and in addition we shall help the dealer with showcards and literature, and in every possible way. By a determined policy we are perfectly confident that the whole trade will be able to do a very big business."—*The Motor Trader*.

Attracting the Motor Tourist

There Are Some Good Ideas in This Story for the Wayside Garageman and Filling Station Owner—It Tells How a California Real Estate Dealer Is Attracting Business With Motor Service Stations

FRANK F. FORD was, and still is, a real estate dealer in Oroville, the seat of Butte County, well to the northern part of California. In the summer of 1917 he made a pilgrimage—as do all good Californians—into the valley of the Yosemite. He went as do those who want to get the most from their trip, he camped by the wayside. And on this trip he conceived the idea of linking up his real estate business with that of the automobile.

With his wife, he sought a place to camp. This was before the days of the municipal camp ground system that now covers the state, and he could not find a spot secluded

from the highway. As the cars of belated and hurrying tourists thundered and roared by all night, making sleep impossible, the thought came to him that camp grounds, fitted up at intervals along the highways of the state, would make wonderfully good places in which to meet the tourist who wanted to become a resident.

From that beginning has grown the service of Ford's Federated Factors. While the camp ground idea has not been abandoned by any means, and camps are being maintained, the service has been diverted to stations located in the principal cities along the great arteries of travel.

FORD, who had accumulated a comfortable fortune in the real estate business, first set about looking for camp sites. He picked, too, sites for city service stations and took options on them. He didn't have the money then to swing all these deals himself, so Ford's Federated Factors was incorporated.

In a nutshell, the idea is this: The Ford's Federated Factor plan is to have service stations along the highways where motorists must pass entering or leaving important cities. At these stations the motorist may secure

oil, gasoline, water, tires, or any of the things usual at a service station. He finds also a comfort station, spotlessly clean, for himself, his wife and children. A rest room is available, where a lunch may be enjoyed. He may make this headquarters for the day he spends in the city. The station is his, without a cent and without obligation.

So far, it looks like philanthropy, but Ford is not a man of sufficient means to follow so prodigal a bent, even if his thrifty business instincts permitted. Where the revenue comes

is from the real estate business which accompanies the station. At all of these there is in charge a Ford "Factor" or manager. He knows real estate as the Ford system of training teaches it, and as has been said, Ford accumulated a comfortable fortune—where many others lost them. The tourist looking for land, for business opportunities, for a home, finds listings covering the entire State at any of these stations.

It used to be that the prospective Californian made his tour by train. He traveled by a schedule set down for him by the railroad companies, and it was an easy matter for the realty broker to meet him at the train. Now, however, he travels as he pleases and he may be hours, days or weeks late. The real estate dealer cannot meet him. But Ford's Federated Factors, tied up to the motoring industry, can and does.

To-day these service stations are in actual and active operation in Oroville, Marysville, Lodi, Stockton, Selma, Tulare and Porterville, with executive offices in San Francisco. Thirty-six men are engaged in attending the wants of the motorist, whether it be for automobile service or for the more profitable side of the organization's activities. Ford plans ultimately to have fifty service stations and automobile camps, with a sales force of 300.

The "Three-F" arch has become the trademark of the corporation, and it is worked into the architecture of all the stations. The idea has been to make this arch symbolical of service, and there are hundreds of motorists who have not purchased California

Building Business With Service Stations



This is one of the service stations that are not only selling accessories, tires, gasoline and oil, but building good will and using it to stimulate real estate sales

property and who do not intend to, who can testify to this. There are other hundreds who have found the real estate side of the service as attractive and as good as the motor car side.

The service station men, even more than the usual courteous service station attendant, are eager to find a way to serve, to make the tourist feel the hospitality of the service. Of course, there is the idea of the real estate side always in mind, but it does not obtrude, it never is thrust forward offensively. The motorist who is merely a tourist is as welcome as the man who is looking for a "location." Inviolable rules govern this phase of the business.

Ford incorporated the proposition because he could not handle it himself. His faith in it was such that he put into it a business in Oroville he valued at more than \$30,000. His initial traveling expenses were more than \$20,000. He turned over real estate valued at \$25,000. He has advanced \$38,000 in cash. He does not own it, this Ford's Federated Factor business, he is merely the president and principal stockholder, and he makes money only when the common stock pays a dividend. And it is paying.

It is a business, unique but already assured of its success. Each station is independent. Each has its own activities. In Stockton Ford's *Friendly Forum*, a weekly bulletin, goes to all the stockholders. All the stations have their periodicals, and in each are listed the real estate offerings and the

wants of the members of the corporation.

The Factor in Marysville has opened on the second floor of his station a big rest room, a community hall and a room for family parties. The

the motor car. It is founded upon the automobile industry, and in California it bids fair to become one of the most thriving of the many industries that have come to birth with the development of touring. Later, it may be

A Cosy Waiting Room for Customers



This pleasant room, with large windows looking out on a pretty street, is where customers are entertained in one of Ford's Federated Factors, a chain of automobile service stations built primarily to attract real estate prospects

Women's Improvement Club meets here after vainly trying for years to secure a place from the municipality. The whole thing is based on service.

Ford's Federated Factors has been made possible through the advent of

carried East, Mr. Ford's plans are ambitious. But that is in the future. Right now, California with its tourists, its automobiles and good roads, offers an irresistible attraction for Ford's ambition.

Salesmen Are Made versus Salesmen Are Born

By WARREN FENTON
With Manwaring & Goodman, Day-Ellder Distributor, Philadelphia

THERE are certain obstacles that seem to impede progress of some salesmen. What some of these obstacles are and how they can be surmounted is what this story seeks to bring to the mind of the reader.

It is often said, "Salesmen are born" and "He is a natural born salesman." These statements could not be more erroneous. If this were true one would lose his incentive to progress, would say, "What is the use of trying, for I know I am not a born salesman, consequently I can never make a success as a salesman." If the work of a salesman is loved, there is no power on earth that can hinder success.

Now let us analyze.

We will say the article is a motor truck. The salesman first must not only believe he has the best truck for the money but he must *know* it. He must first sell himself through and through. If this cannot be done with the truck he is trying to sell, he might as well give up the idea of making a success for this is one of the basic principles of success as a salesman. "No man can inspire

confidence in others who has not confidence in himself."

The organization he is with is the next consideration and equally as important. The success of an organization depends entirely upon co-operation, and co-operation should be applied and practiced by each individual. It is true we do not all see alike but if we endeavor to come in tune with or harmonize ourselves with those principles of our organization which we do see as just, we render our co-operation intact. Co-operation in little things is the basis of co-operation in big things.

To co-operate with an organization, it is first necessary to co-operate or coincide with individuals. To come into harmony with some people's thinking and acting owing to their different views from yours, may be rebellious to you and make you feel that you cannot co-operate with them. In other words, you are seeing nothing but discord in them, a most selfish outlook on life—the world is wrong, I am right—way of looking at things.

There are certain keys with which a

man can open another man's heart. None of these keys will operate with antagonism, lies, promises that cannot be fulfilled, etc., but they will operate with truth, consideration and justice.

It is every salesman's sole object to have his buyer believe what he tells him, thus it should be the primary thought in the salesman's mind to apply a means through which he can possess this confidence. We cannot emphasize too much this point—gaining confidence. Confidence is the power back of sales. Confidence is the backbone in a successful business. Confidence is in hand with faith and a stepping stone to understanding and knowledge.

The art of being able to gain this confidence is what every man can accomplish if he will apply the simplest principles of life, such as truthfulness, sincerity and frankness, coupled with a smiling countenance.

What is needed in the commercial world is less of self, and more of honest purpose. Nothing can be lost by giving all that is in you, but much will be gained. It is the law of compensation.



Are You Apologizing for Being in Business?

Do You Realize That Upon It Depends the Very Existence of the Nation?

The business thoughts on this page are extracts from an address by George M. Graham, vice-president of the Pierce-Arrow Motor Car Co., before the New York Conference of Business Paper Editors.

LET us have done with the defensive. Let us wage a bold and honest fight for our just share of the rewards of trade.

We err in thinking of business as something detached and unrelated, having to do only with the merchant, the manufacturer and the financier.

Actually what we speak of as business is inseparable from almost every phase of human experience. It soars at the mountain top of nearly every hope, and plumbs the depths of almost every despair. *Upon it depends the very existence of the nation, since our prosperity must finance our defenses.*

BUSINESS combines with nature to decide whether or not the fields shall blossom. It is the force that replaces one blade of grass with two, or three, or ten thousand.

The hope of material reward guides the hand of the artist and dominates the brain of the author.

Business creates the home. It is the guardian of the child. It wields the magic brush of sustenance which paints the red of health

on the baby's cheek. Infant mouths ten thousand miles away depend for their food on the fluctuations of our trade.

Upon the worker's share of business profits depends his ability to educate his children. Who can tell how many an Edison, a Steinmetz, a Schwab and a Roosevelt may not have been lost to us through business depression?

Business even accomplishes miracles, since it permits the father to stretch back from the grave over his loved ones a protecting hand.

TO serve a force so mighty and so beneficent is a consecration worth while.

Therefore, each man to his task, each to his duty, ready to do and give, to use and be used.

AND this be our law and summons:

"Who wields a blow at business strikes at us all, but who bravely and patiently struggles for its betterment heals the wounds of war, restores battered nations, opens again the door of opportunity, prepares for comfort, happiness, peace and prosperity, and renders to democracy, to home and to humanity the world over the loftiest meed of service."

Maybe the Cat Was Right

By RAY W. SHERMAN



REILLY, who sold the Sennett in and about Callawassa regardless of the weather, was thinking as hard as was possible with the thermometer at a respectable 95 in the shade and exhibiting most disorderly tendencies when no shade was available.

On his gleaming cranium great drops gathered, and when there were enough of them they boldly shouted "Let's go!" and dashed in mad abandon into his eyebrows or down the back of his neck. Reilly had long since admitted as futile any effort to stem the rushing tides and had reduced his effort to a more or less vain attempt to poise his head so a minimum of moisture obscured his vision.

Aimlessly his fingers pawed through a deserted corner of a desk drawer. Matches had prompted the search, but the memory of the object of this hunt was not long retained, and the result was momentarily satisfactory as he drew forth a slip of paper on which at some time in the past he had penned these words:

"If everything was opened up
And everything was free,
"And nothing mattered anywhere,
How simple it would be
To find in almost anything
Whatever might be there,
And anyhow, and anyway,
But something anywhere."

"That's just the way I felt to-day!" he said. And then he turned and read the aimless yet meaningful lines to Tommy Trumbull, who was nearly ready to give up as hopeless his attempt to transform a sheet of white paper into a form letter without having the white paper too rapidly approach its original pulp condition.

Tommy's only reply was to grunt, and he went on with his letter, but finally he found himself helpless as the foolish jingle pushed the form letter from his mind.

"Where'd you get that fool thing, anyway?"

"The poem?"

"Yes."

"Oh—as nearly as I can remember, I copied it off the wall in a restaurant or a rathskeller or something of the sort a

long time ago. As I remember now there was a black cat, or the restaurant was named Black Cat, or something of the sort. Anyway, I know there was a black cat connected with it, and so far as I'm concerned I'm willing to concede that the cat was the author of it."

"Well, the old cat's got me all messed up. I can't get the darned thing out of my head!" Tommy declared. "I can't even write a form letter—or anything else. I can't find anything in anything anywhere or—anyhow—or any place—or whatever the cat said."

"But, you know, Tommy," perspired Reilly, as he leaned back in his chair and let most of the drops run down the back of his neck, "there's an enjoyable hot-day thought in the darned poem. It's restful and refreshing. It makes me believe there may be some justification in not working so hard—especially when the weather is so hot."

Tommy picked a cigarette from its container with the point of a lead pencil and leaned back with no manifestation whatsoever of energy. He was willing to let anybody talk, recite or think—so long as it involved no labor on his part. Reilly reread the poem to himself.

"Sometimes, Tommy," Reilly continued, "I think some folks work too hard. You know, Tommy, I once heard a famous newspaper publisher and philosopher say in a speech that there should be a certain latency of energy in people and in business if we were to have healthful efficiency. He said we should not be working to the utmost capacity all the time, because, if we did so, there would be no reserve power upon which to draw when emergencies arose. An automobile engine has to be built with latency of energy. It seldom operates at its maximum capacity. It rolls along the road at fifteen, or twenty, or twenty-five miles an hour and seldom is it called upon to run at all the speed it has. If you compelled it to run at top speed it wouldn't last long—that is, some engines I have known.

"The latency of energy has to be built into the motor so it will do all the little

average jobs that are given it and still have some reserve power with which to meet the unusual demands that are made upon it. We could build a car that would be working at capacity at twenty-five miles an hour but who would want it? We'd be back in gear every time we hit a grade and couldn't hit thirty on an open road.

"It's much the same with people and organizations. The average speed should never be the maximum of the organization, because your organization will soon degenerate into a machine that does over and over again the tasks it has to do because it has no time for anything except the immediate job in hand. In order to have any head work done by a man or an organization there must be a speed a bit less than maximum. And if it is a bit less than the maximum the man or the organization can always rise to emergencies and get over the hills on high if it is necessary.

"Of course, I wouldn't for a minute recommend that a man adopt a policy of trying to see how little he can do. Rather, he should so plan his operations that he gets some time, somehow, to inspect himself and his work and think. If he doesn't find time to think he becomes an automaton, doing the same thing over and over again, with the result that, as the detailed, repeated job falls on him, he becomes less efficient on even the repeated job.

"A man or an organization that works at an excessive speed soon feels the strain. The work becomes monotonous. The results are affected. The quality is lowered. The job suffers. The search for maximum speed has failed to get maximum results."

"I'm for less work!" declared Tommy.

"Not less work, but more intelligent planning and greater results," Reilly answered.

"Well, anyway," said Tommy, "I don't know what it all means, but I think maybe the cat was right."

And Tommy resumed dripping little drops upon what might some day be a form letter.

Earn a Dollar

1—Help some other man.
2—Make a dollar for yourself.

The Accessory Merchandiser

WHERE is the camper going to obtain his equipment and supplies? He may have visited several stores in order to get his full complement of necessities, but the convincing window display will guide him in the direction of your store for some of the things he requires.

Every accessory store carries several items of automotive equipment that are particularly necessary for camping and touring comfort. Here are some suggestions for the arrangement of windows to appeal particularly to tourists and campers. It is a simple matter for the dealer to work into the displays certain suggestions in the way of accessories.

The Camper's Abode

Meier & Franks, Portland, Ore., arranged a window display to represent the interior of a camping tent. Striped awning was arranged over the top and sides of the tent. The left half of the tent interior was occupied by a cot, spread with a disarranged blanket, as if someone had just occupied it. Carelessly thrown over on the bed were such articles as a pair of heavy outing boots and woolen socks, together with recent issues of an outing magazine. The right half of the tent interior contained a table, on which reposed a number of aluminum cooking utensils. Another article inside the tent, just by the foot of the bed, was a camp stool, which held a rifle and some boxes of cartridges. Just outside the tent was a camp cook stove, with a frying pan on top.

Mealtime in the Woods

The Honeyman Hardware Co., Portland, Ore., introduced atmosphere into their forest camp window setting. Down in front was a folding camp table, seated at which were two large dolls. The first, a man, had a tin cup in his hand, while his feminine companion was posed in the attitude of clearing up the almost finished meal which was spread out on the table. The rear part of the floor showed where the meal had been prepared over a small camp stove. Scattered around the moss covered floor were thermos bottles, knapsacks, decks of cards, poker chips, maps, goggles, watches and other camp paraphernalia. The background was devoted to a painted set of a mountain camp scene. Around the border of the window real evergreen boughs were laid. On one of the boughs a forest fire warning was posted.

Happy Days in the Camp

Dyas, Los Angeles, employed a window card to announce that,

*"Camp Days Are Happy Days
When Using a Dyas Outfit."*

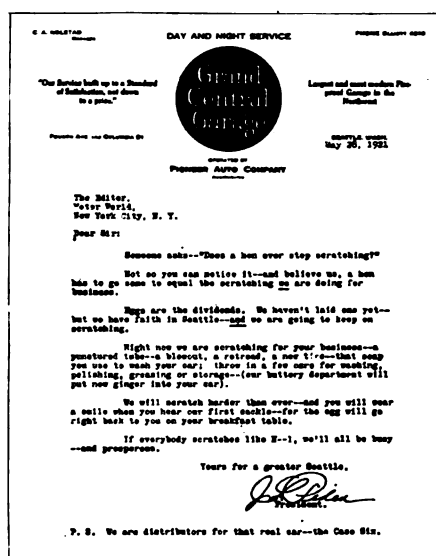
A large mirror, the edges of which were cleverly camouflaged with sand and moss, covered a large part of the window floor. There was a small row boat in the middle of the lake, with a child in a bathing suit rowing the boat. Over to one side a small tent was pitched,

with a camp bed inside. A camp table in front of the tent was spread for a forthcoming meal, with child dolls gambling with a toy dog near the tent. Flowers grew in the moss around the tent, while the rear of the window was banked with greenery and trees. Stuffed squirrels were placed in some of the tree branches.

In One of the National Parks

The American Travel Bureau, Los Angeles, arranged an appropriate setting that could be utilized to push the sales of camping accessories. Sand was liberally sprinkled over the floor.

Scratching for Business with a Clever Letter



Wouldn't this letter impress YOU if it came in the morning mail? It leaves, after reading, a desire to meet the author and learn something about his business. Maybe you can adapt the idea to your business

The background was provided by a number of large photographs and data dealing with the Yosemite National Park. The center of attraction was a camp fire, simulated by concealing a red electric light bulb beneath a pile of dried leaves and twigs. Two dolls, attired as campers, were seated around the fire. At the back was a typical log cabin, while an interior view of the tastefully furnished cabin was possible through the open windows.

An Appeal to the Angler

Piper and Taft, Seattle, appealed particularly to the camper with angling tendencies. The back of the window, from ceiling to the floor, was banked with ferns. At the base of the fernery background was a long mirror, surrounded by sand and real rock. The length of the mirror employed gave it the appearance of a creek. Near the left of the center a tree with abundant foliage was planted, with the wax figure of an angler leaning against the tree

while fixing his rod. The center was devoted to a small camp fire, the smoldering embers indicating that it had only just gone out. Camping articles were exhibited on the floor in other parts of the trim.

The Angler's Retreat

The Lazurus Hardware Co., Charleston, S. C., had a window drive on the camping angler. A painted backdrop showed a mountain stream, with trees bending over the water and mountains in the distance. In the foreground of the window a real canoe was exhibited, with the polished paddles and dark green cushions in it. The boat also contained a variety of camping accessories.

The Wild Flower Appeal

The Foster Co., San Jose, had a window drive on pocket compasses. Such a simple thing as a vase of beautiful wild flowers caught the eye of many passers-by, who also read the card which accompanied the simple exhibit.

"For All Who Love the Out of Doors."

The vase was surrounded by a number of pocket compasses, attention to which was directed by the card, captioned:

*"A Good Pocket Compass Is Your
Life Insurance in the Woods."*

The pocket compasses were priced up to \$5. The same wild flower idea could also be effectively applied to other articles used by campers.

Camp Cooking Outfits

Liggetts, New York City, devoted a narrow side trim to camp cooking appliances. The rear wallboard paneling was cut out to represent a log cabin, and then lined with white birch bark. A window was slit in the middle and covered with yellow cheese cloth. The partly open door of the log cabin bore the camp name. Artificial creeping vines in full bloom trailed down the sides of the cabin, while a card down in front offered:

*"Cooking Outfits for Camping.
Simple, cleanest and most efficient."*

A log fire at the front center was simulated by a neat arrangement of logs, with a lighted red electric light bulb shining through the logs. Over the "fire" were a number of cooking utensils, including a pot and frying pan.

Green shavings covered the floor, with cooking outfits exhibited here and there on imitation birch bark pedestals.

The Automobile Camper

Morton's, Camden, Me., also exhibited a late model touring car in their show window. Attached to the machine was a bed of the fold-up variety. At the opposite side a small tent was pitched, while at the center front a white crepe paper lunch cloth was spread on the floor. The table contained foods in cans and packages, together with table cutlery and dishes, which had been removed from an automobile hamper exhibited in front.

Editorial Observation

Sales Resistance Factors

IN some of the larger cities, notably New York, two factors of sales resistance are becoming increasingly important to passenger car dealers. One is the high cost of garage facilities and the other is the growing congestion of city and suburban traffic.

Particularly in New York dealers in low and medium priced cars are finding every month more and more prospects who would invest in automobiles but for the prohibitive (to them) cost of live storage. When garaging of a \$1,000 motor car runs anywhere from \$20 to \$40 a month, persons of moderate income are going to think twice before they buy. Big city dealers are finding that they are thinking twice—to the detriment of sales.

It may be necessary eventually and it certainly would not be amiss at present for dealers in cities where high garage costs are holding down sales to interest themselves in activities intended to place at the disposal of the public lower priced storage facilities. Here and there have been developments of one-car garage communities on otherwise waste land, where there has not been the usual heavy overhead of the garage with elevators, lighting and heating facilities and numerous employees. In these garages, which offer protection of the car without a lot of the service that the high priced car owner demands, it is possible to sell space as low as \$15 a month in the larger cities, and it is likely that some way may eventually be worked out to make the price per car lower. It would seem that dealers might do well to investigate such possibilities as these either with a view of forming co-operative companies of their own to operate such garages or of interesting outside capital in such enterprises.

The question of traffic congestion is one which, of course, requires building of roads, bridges and tunnels to work out complete solution. In New York the projected vehicular tunnel connecting Manhattan Island with New Jersey will help solve one phase of suburban traffic congestion. This tunnel will do away with some of the long waits now imposed upon motorists using the ferries to get out of New York to the west. The suburban touring situation, however, within a radius of 50 miles of New York shows little sign of immediate improvement. On Saturdays, Sundays and holidays cars move in an almost continual procession along all the improved highways within a day's touring radius of New York, New Jersey, Westchester County and Long Island. Building of additional roads, of course, would relieve the congestion and this is a problem of the suburban communities with which dealers in all large cities must concern themselves.

There is still another possibility of cutting down the volume of suburban traffic in the large cities. Dealers might find it worth while personally and through their advertising to encourage motor travel to some of the undiscovered points within the limit of their own cities. Many a motorist merely from habit turns his car toward the country when if the suggestion was laid before him he might make some of his tours around the interesting points of his home town.

As time goes on, dealers will see the necessity for taking more and more interest in garage facilities and traffic. They can do much co-operatively and individually to cut down the factors of sales resistance resting on these two foundations.

Better Window Displays

A PROBLEM that passenger car dealers might well give attention to along with other means of stimulating sales is better use of their window display facilities.

Only a small minority of the dealers of the country are getting anywhere near 100 per cent efficiency out of their show windows. A majority of the windows are practically valueless as business builders except when illuminated. In the day time they are merely expanses of plate glass behind which passersby may assume automobiles are displayed. But the cars cannot be seen by persons on trolleys or motor cars in the middle of the street and are not even clearly visible to pedestrians a few feet away on the sidewalk. This is due to the reflective quality of the glass and applies, of course, to any sort of mercantile establishment as well as to motor car salesrooms, but most merchants have found means of overcoming the difficulty.

Everyone is familiar with the methods employed by department stores and by some of the more progressive automotive equipment dealers, who build backgrounds for their window displays which take up the reflective action of the glass and makes the merchandise stand out. Only a few passenger car dealers have attempted to do anything of this sort. When they have the effect has been striking and their windows have been subjects of wide comment.

Automobile dealers probably are right in objecting to permanent window backgrounds such as built into the general run of mercantile stores, because such construction would mar the beauty and dignity of the spacious showroom with its tiled or slated floor extending directly back from the street windows. It would seem, however, that practically all dealers would find it to their advantage periodically to "fence off" their windows so that a car or several cars might be put on display with all the effectiveness which marks the windows of so many other kinds of business. When a dealer receives a new car model or when a holiday is approaching or some other special occasion calls for special display, would it not be worth while temporarily to build a background for one or more of his show windows and present a car or cars so that the display would not merely attract people passing along the sidewalk but observers in automobiles, trolley cars and other conveyances?

It might pay some dealers to have removable screens built for use on these special occasions.

Automobile dealers have invested millions of dollars in street front showrooms. Should not these display facilities be more adequately utilized, especially during the summer and fall touring days that are now beginning?

LETTERS *from* READERS

Timer Inspection and Replacement—a Trade Opportunity

Editor Motor World: Investigation into merchandising and repair conditions in this industry often uncovers a surprise.

It seemed to me that the function of the timer on a Ford car was so well understood that repairmen and owners both would be watchful of its efficiency, quick to discover when it was working improperly and equally desirous of replacing the commutator when it no longer rendered the expected service.

Inquiry among Ford owners showed that while the majority knew a commutator was part of the Ford equipment, a disappointing minority knew its importance, and still fewer ordered its replacement.

I found that when replacements were made, it was usually in the ordinary course of repair work, on the initiative of the service man, and lumped in the repair bill. The timer was changed, but the owner did not know why.

It was also revealed that at least four bills for ignition repairs were paid by an owner who admitted he should have known better—the need for which repairs stopped when a garageman in another town, said, “No wonder; look at this timer” (a worn and battered wreck, whose contacts and race looked like a piece of corrugated board).

Only one Ford owner was found (the investigation was limited) who really checked up his timer's performance. He said: “Whenever I have any trouble with my ‘fliv,’ I look to see if I have enough oil, and then hop to the timer.” He admitted that it took two years of driving and two Ford cars whose honest motors “bucked” on poor ignition before he learned how important a perfect timer was to the running of his car. He said he now buys about four timers a year. He is an active real estate salesman, and drives his car perhaps 60 miles every working day.

A number of owners when questioned grinned sheepishly, admitted knowing nothing about the Ford motor, and said if things weren't just right they took the car to the service station, laid it up for a few days, and then went along until the motor gave trouble again.

Accessory dealers were found to know that timers could be sold—but only a comparatively few realized that as a matter of good business timers ought to be sold more aggressively.

In checking up the repair field, we were compelled to cancel the Ford service station, because, while in the ordinary course of honest service work a worn timer was replaced, it was beyond

reason to expect the Ford agents to point out constantly a part which needed replacement.

In service stations, garages and repair shops other than Ford, it was found that in the ordinary shop or store if a man wanted a new timer it would be installed for him if they had it in stock—or would get one for him if they had not.

In very few cases was it discovered that anywhere—dealer, service station or repairshop—was an intelligent effort made to complete a repair service by offering to replace a timer which was in bad condition.

The repair trade fell into three classifications—those who honestly did not know, those who frankly did not care, and those (the smallest group, I am happy to say) who saw in a timer's hidden inefficiency a hook to bring a Ford owner back soon for more repairs.

Mr. Editor, somebody's asleep at the switch. Everyone knows enough to watch his spark plugs, or to sell them, or to suggest a new one or a set. And everybody's right, too; because spark plugs are frequently the source of an unseen power loss, and at their best require at least a frequent cleaning and adjustment of points.

But here is an opportunity to offer a genuine, honest service on a vitally necessary part—the timer—which requires far more frequent and regular replacement than spark plugs, one whose efficiency underlies that of the plug, which is often blamed undeservedly for the timer's incompetence.

Mr. Ford and his great organization, I understand, have just turned out motor No. 5,000,000—the large majority of which are still operating in the United States. We say nothing of the hundreds of thousands made for and operating in the rest of the world.

Does not that inconceivably vast army of Ford owners offer a market which will repay cultivation on the basis of intelligent service?

And is it not intelligent service to point out plainly to Ford owners that their cars will work better all around, at least insofar as the engine is concerned, if the commutator is replaced, or at least inspected, at regular intervals?

“Too busy,” I hear somebody say, sweating under a car on a hot July day.

Nonsense! Put a card up in the window, on a wall, on a door at the entrance, if you will—“Let us inspect the timer on your Ford car. It must work perfectly or your Ford won't.”

Let the jobbers (my hat is off to them)

designate a period for a timer drive. Tell their dealers to have a timer inspection week—send out postal cards of invitation to drive in for inspection, use the telephone, run a card in the local newspaper on “This is Timer Week. Your Ford timer should be inspected and repaired or replaced this week.”

Thus a more genuine appreciation of service will be given—the service of prevention—the kind of service which makes a sale, makes a profit and makes the goodwill that keeps you making profits and keeps you in business.

Nearly 4,000,000 prospects to work on! Just a little intelligent, coordinated effort—and a million timers could be sold that week, and the whole 4,000,000 Ford owners shown how important the timer is in the operation of their cars.

A little pep, a germ of intelligent sales effort, sales, profit, goodwill because of “preventive” service—a simple, sure program which will lead positively to the creation of a new, permanent source of service, sales and profit.

Can it be done? You tell it. But I tell you that one jobber in the State of New Jersey ripped a punch into his sales force, and they went out in that limited territory and sold 4,700 of a certain make of timer in 30 days—part of that number were dealers' re-orders within that period—and at the end of 30 days the jobber had not one timer in stock to meet a re-order for 50 which came in that afternoon, and was forced to 'phone the factory long distance to get a shipment of 500 in the express office that night.

It can be done—and this is the year. If ever the automotive industry needed sound, intelligent, service-giving sales effort, *this is the year.*

The “gyps” step lively all the time. Why not the regular fellows? The Salvation Army one time played the “Coochee-Coochee” at an outdoor meeting in New York. In answer to the storm of criticism, it is said that Commander Booth replied, “Why should the devil have all the good music?”

Are the “gyps” the only fellows in the automotive accessory business who have the “pep” and the knowhow to sell goods to-day?—John Splain.

From a Texas Dealer

Editor Motor World:

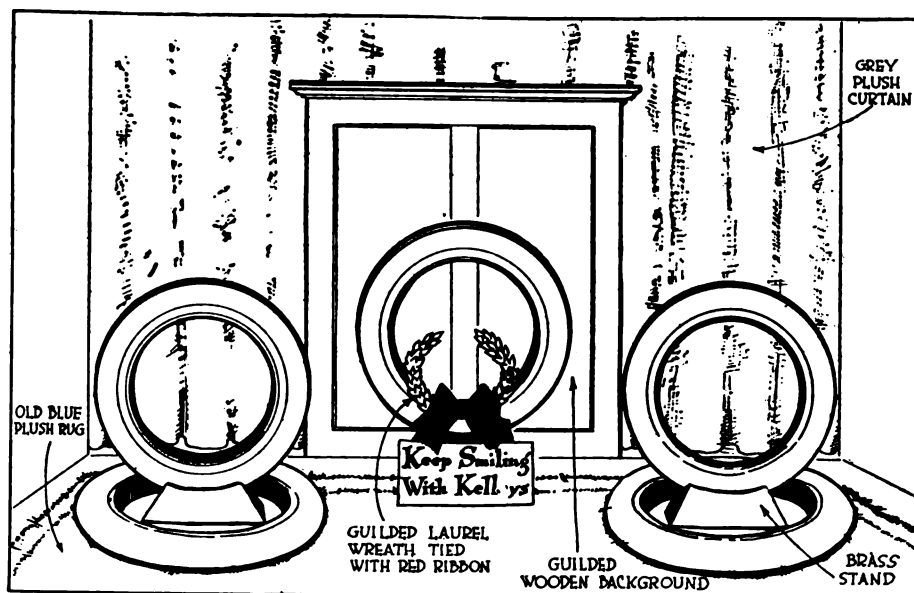
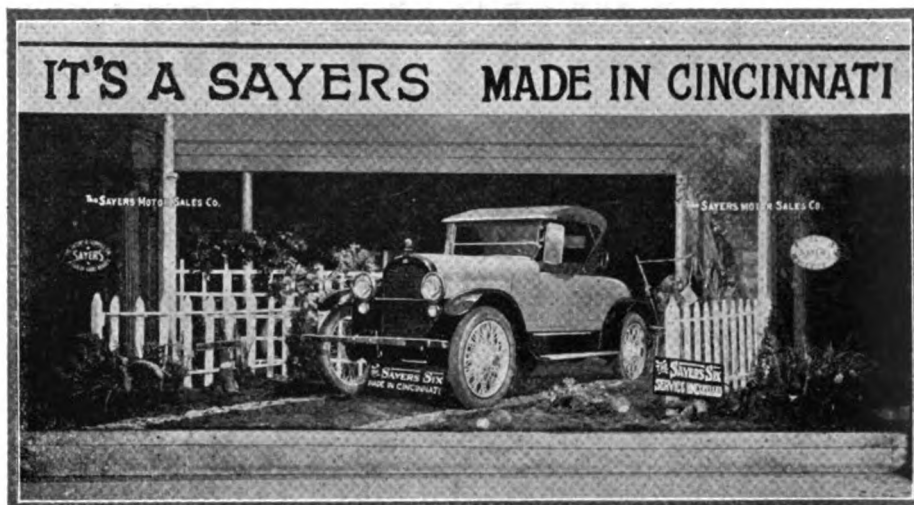
I have been reading Motor World for three years and wish to compliment you on the assistance you are giving to the industry. I wish to especially compliment you on your editorials regarding car manufacturers giving independent garages larger discounts.—W. E. Lott & Son Garage, Mineola, Texas.

NOW Is the Time When Windows Will Sell

WE'RE at the start of the mid-summer touring season—when people want to get the most out of their cars and when they need tires and accessories to get the most out of them. It's time for the automobile dealer, the tire and accessory man to make the most of his opportunities to attract the attention of car owners, to attract trade. It's time to make the most of the sale-making ability of window displays.

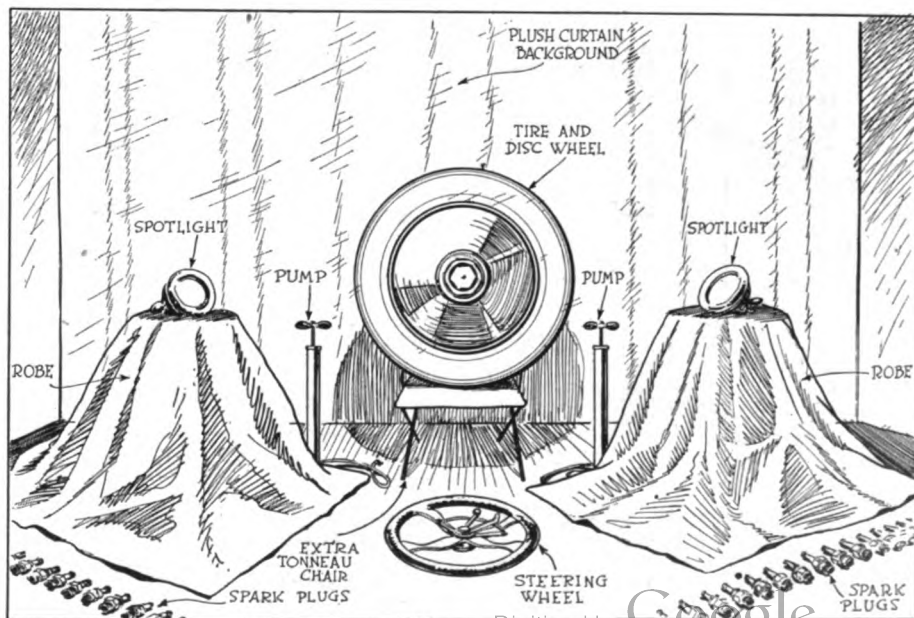
In accordance with its weekly custom *Motor World* presents here three window display ideas:

Upper—This is the way the Sayers Motor Sales Co. of Cincinnati used its window to show a roadster starting out on a summer highway—out of the home gates and into the open of sunshine and trees and grass and flowers, as hinted at in the "scenery." Any dealer can build the gates of cardboard, painted white or white-washed, and the green stuff can be rented from a florist.



Center—Tires—and simplicity—yet how attention-compelling. This is a Kelly-Springfield window. The lettering and arrows tell the story.

Lower—General accessories—and another triangular arrangement, like the one above. A dealer would not have to buy anything to set up this window. There are packing boxes under the robes and a folding chair for the car or the roadside picnic serves as a stand for the tire and wheel.



HOW GOOD A SALESROOM IS YOUR WINDOW THESE SUMMER DAYS?

A Department of

BETTER MECHANICS

Conducted by J. HOWARD PILE

No. 198

When asking for information, please state whether you maintain a permanent file of Motor World, as many inquiries are answered by reference to previous issues

Lining Up Crankshaft Bearings and Cylinder Walls

Satisfactory Operation Cannot Be Expected if the Cylinder Walls Are Not at Right Angles to the Crankshaft and Its Bearings—Tests and Gages for Checking Up These Details

SMOOTH running of the engine and long life of the pistons, cylinders, rings and bearings depend almost altogether on two things—proper and regular lubrication and correct assembly and alignment of the parts. We are finding out a good many things that we did not understand a few years ago, and one of the most important of these is absolute size and alignment of the cylinder wall, as far as it is possible to get them correct with present day tools. Some years ago as far as the best mechanic could think was in a sixty-fourth of an inch, and there were few tools that would work to finer limits. To-day we have tools, gages and jigs which make

it possible to easily work to one-thousandth of an inch, and in some cases even smaller limits.

With these possibilities in front of us, it is of vital importance that more attention be paid to cylinder alignment. The base of the crankcase is machined true and flat, and in more expensive cars this is worked to closer limits by lapping on a large surface plate. Starting with this as a basis, we can measure angles and distances from it.

Bearings Parallel with Base

The bearings must be parallel to the base surface. Fig. 1 shows a diagram of the three relating surfaces, and the

center lines of the cylinders and of the crankshaft. The bearings are indicated by dotted lines. Assuming that the bearings are parallel to the crankcase base, then the cylinder walls should be at right angles to the crankcase base and so at right angles to the crankshaft and to its bearing surfaces.

Fig. 2 shows how the parallelism of the bearings can be tested out with a surface gage. This is not the most accurate method, but with the use of chalk on the shaft or tissue paper between the point and the shaft, a very accurate test can be made. The multiplying gage, shown in use in another way in Fig. 3, can also be used on this test. It is to be understood that in making this test the shaft must be clamped in close contact with the bearings or a small amount of dirt or spring on the shaft would throw the reading out. It is not necessary that the shaft be the exact diameter of the bearing, as it will still serve the same purpose if it is a little smaller.

Squaring the Bore to the Crankshaft

The most important relation of all is the squareness of the cylinder walls to the crankshaft bearings, and a practical test jig for this purpose is shown in Fig. 3. The long shaft can be made either round or square, but the latter shape is more convenient, as the same jig can be used in a number of different size bearings. It is only necessary that the two corners touch the bearings and the shaft is then clamped lightly in this position. The clamping can be done by using two straps drilled for the regular bearing bolts or studs.

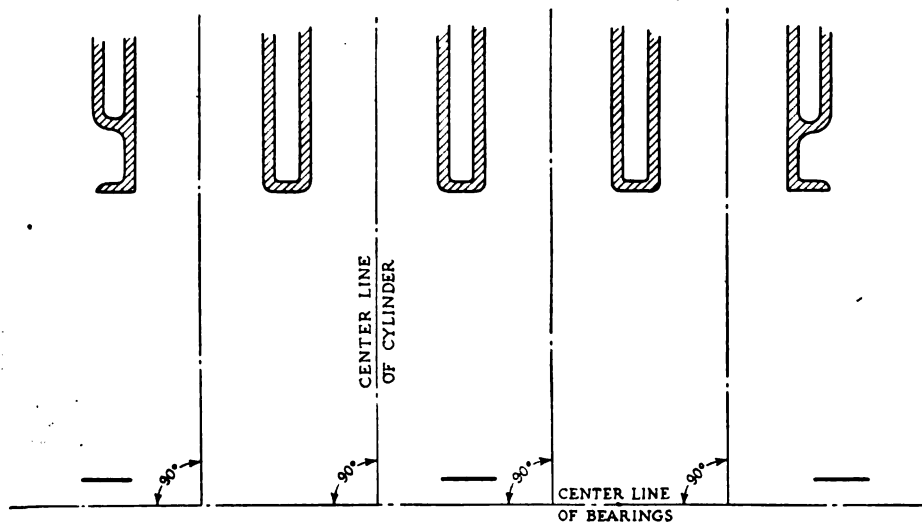


Fig. 1—Diagram showing the center lines of the cylinders and the center line of the crankshaft

The upright piece of the gage must be square and is welded to the shaft. After welding, the two surfaces that come up from the shaft are machined or ground exactly square with the bottom of the shaft. A multiplying needle gage is then inserted between the upright at the top of the cylinder wall and the reading noted. It is then moved to the lower part of the cylinder wall and the reading again noted. If the cylinder is at right angles to the bearings, the readings would be the same. A permissible variation would be about 0.002 or 0.003 in. Any difference over this certainly calls for straightening up the bores of the cylinders.

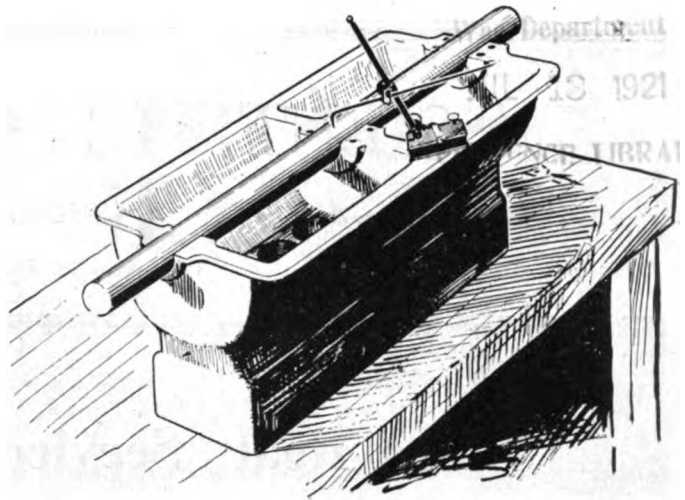
In this connection be sure to test the cylinders for uniform diameter with an inside micrometer or a multiplying gage. If the cylinders are worn bell mouth or are tapered, of course the reading for squareness will be of no value.

Using a Cylinder Re grinder

The shop that possesses a cylinder re-grinding machine can make these tests right on the machine and combine the uniform diameter test and the squareness test. The block is bolted to the angle plate and the grinder set so that the wheel just barely touches the lower part of the cylinder wall all the way around. The tool is then started in feed through the bore. If the tool starts grinding on one side of the cylinder when it gets in a little way, then the bore is not square and it will be necessary to regrind to the full amount called for, this depending on the amount that the cylinder is out of square. This machine will also enable the operator to tell whether the cylinder is worn tapered.

As a rule, the top part of the bore wears the most because it takes the continual pressure of the piston rings. Below the point where the rings bear on the cylinder wall the wear is generally greatly reduced, and so this part of the bore will be smaller than the top. In addition to this, the cylinder may be worn oval so that it is no longer a perfect circle,

Fig. 2—A surface gage is used to test the parallelism of the bearings and the machined surface of the crankcase



Connecting Rod Test

The final test in assembling is the test of the holes in the connecting rod. There are many devices on the market at the present time for making this test either on one model or to accommodate a number of different sizes. These are really superior to the test shown, but the illustration is to show the tests all made with approximately the same kind of instruments. An arbor is placed in each of the holes, these arbors being the exact diameters of the holes. After clamping up tight, the surface gage or multiplying gage is inserted at a point on each side of the connecting rod and the same distance away from it.

If the holes are parallel, the measurements will come out the same. If the measurements are different, the rod must be bent until both measurements are alike within 0.001 in.

There is also another test to be made for twist in the holes, and this is made by mounting the lower arbor on two V-blocks that are exactly the same height from the surface plate. The upper arbor is then tested with either the surface gage or the multiplying gage.

When these parts have all been tested and found to be true, the assembly of the engine may be carried out with a feeling of sureness that there are going to be no binds or twists in the piston. Furthermore, the piston, rings and bearings will have a chance to wear in naturally, and

will not be cut and scored from undue pressure.

When a cylinder is not squarely bored or ground, the piston is at an angle with the center line of the connecting rod and the piston pin bushings are subject to pressure and strain that will eventually cut them out and start a knock at that point. If the cylinder bore is, say 0.01 in. out of square, then the difference between the top and bottom of the cylinder in a fore and aft direction will amount to 0.01, and this means that the connecting rod bearings will have to move back and forth this amount each half revolution, or else some part will have to take a bending or twisting strain amounting to this much.

There are many engines operating which are out of square much more than this, and they are noisy and short lived. Sometimes a block will come through from a factory in this condition and the dealer will have considerable trouble before he finds the trouble, because he will assume, of course, that the factory could never send out a job in such a condition. However, they do slip through sometimes, and a test of this kind should be made before looking for trouble elsewhere.

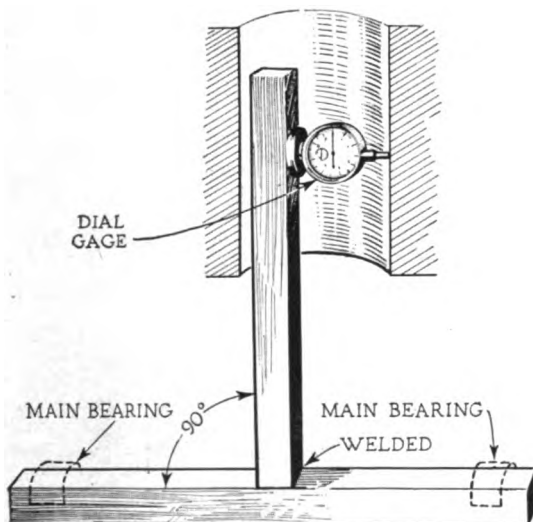


Fig. 3—A testing jig consisting of two square bars welded together and machined or ground off so that they are at 90 deg. or right angles. The multiplying gage will indicate whether the cylinder wall is at right angles to the crankshaft bearings

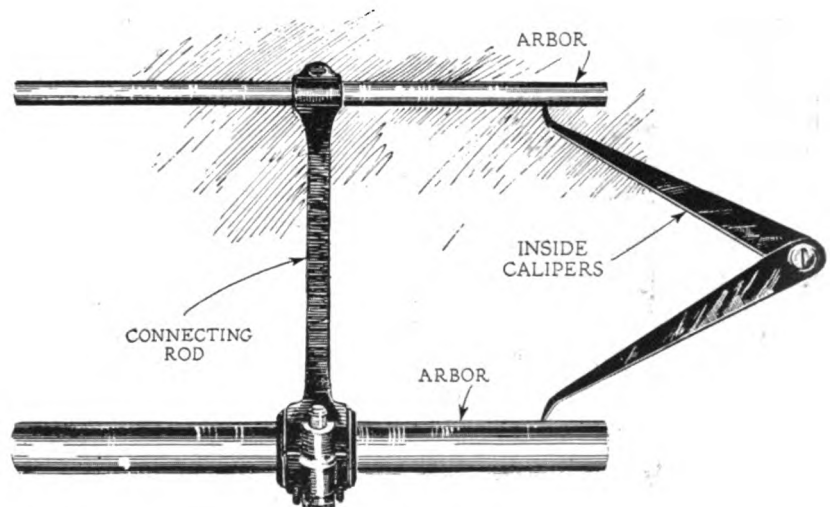


Fig. 4—Although there are a number of stock jigs for making this test of parallelism of the connecting rod holes, the test can be carried out in this manner

SCIENTIFIC CONSTRUCTION

GARAGES

SHOWROOMS

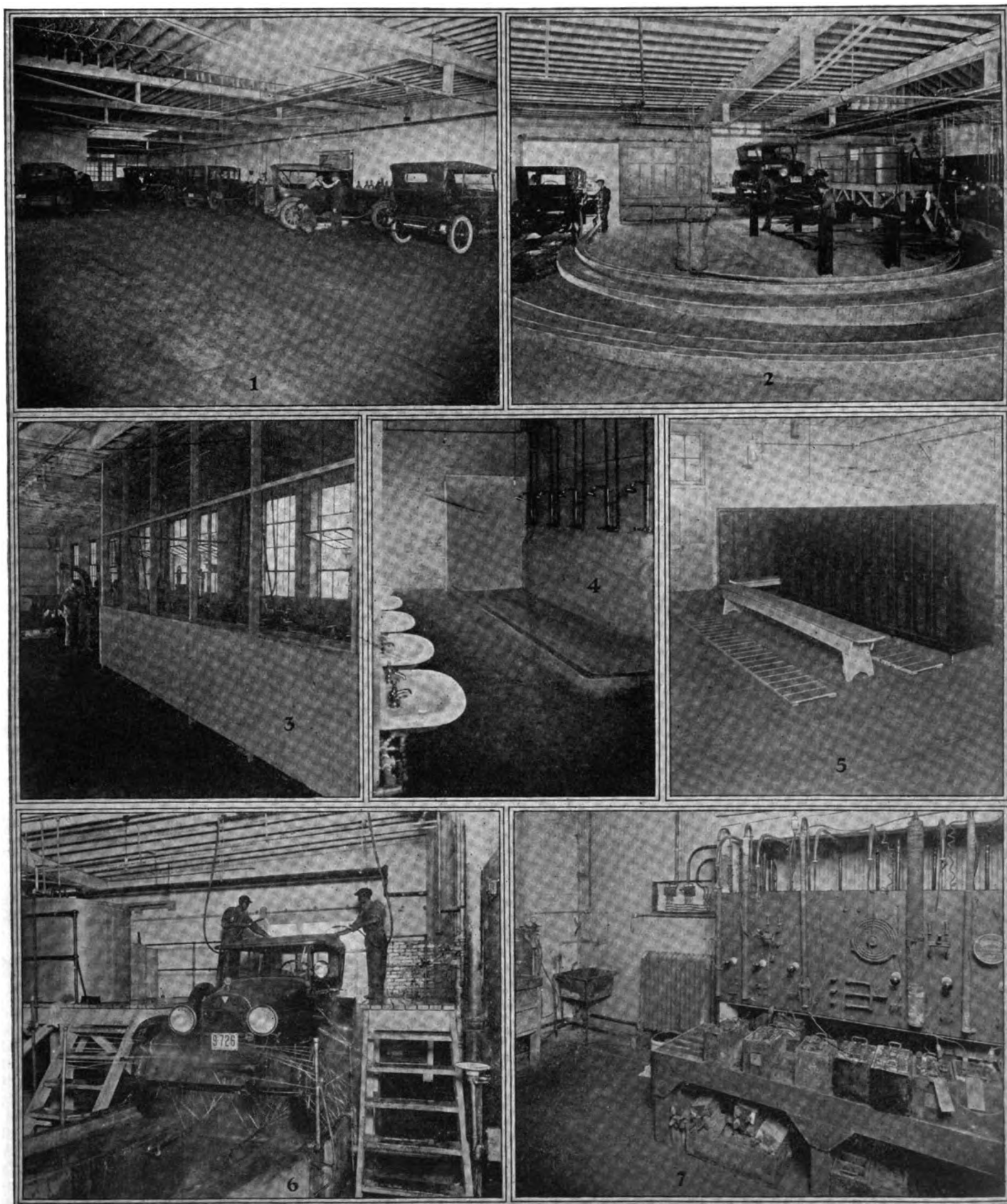
REPAIRSHOPS

Conducted by DONALD D. BLANCHARD

A Real "Service Station of Today"

*Mechanical Efficiency and Patron's Convenience
Are Combined in This St. Louis Building*





Opposite page: 1—The new service building of the Hudson-Frampton Motor Co., St. Louis. The building is entirely separate from the sales building. 2—A cosy corner in the salesroom. 3—The service department office. 4—The roofed over area is the quick service depart-

ment. The huge yard is used for a public parking space.

Above: 1—The main service floor. 2—The curved runway leads to the automobile laundry. Cars are lubricated quickly and easily on the elevated tracks in the center of this picture. All the

running gear is readily accessible. 3—The machine shop is enclosed by a chicken wire partition. 4—The employees' wash room has five shower baths. 5—The locker room. 6—The automobile laundry has a capacity of 70 cars daily. 7—The battery shop and charging bench.

THE LAW

By GEORGE F. KAISER

Perplexed?

Does some point of law perplex you?

Why don't you ask MOTOR WORLD'S legal editor to discuss the question?

Negligence Made Garageman Responsible in Fire

Another suit for damages by a customer against a garageman, for the loss of his automobile in a garage fire, was recently decided, this time by the Supreme Court of Colorado. Judgment was rendered in favor of the customer and against the garageman on the theory that it was the latter's negligence which caused the loss of the customer's car.

A garage in the city of Grand Junction was destroyed by fire on January 22, 1918. Among the cars destroyed was the car of the man bringing suit. The car owner recovered judgment in the sum of \$1,311.20.

The Supreme Court reviewing the case said, "The evidence was sufficient to justify the jury in finding the following facts: The garage in question was heated by a furnace located under the center of the main floor. That portion of the floor directly over the furnace and there constituting the ceiling of the furnace room was made of wood. Upon it cars were stored and it was more or less oil soaked. Within five feet of the furnace door was a wooden post extending from the floor of the furnace room to the ceiling. The night was cold and there was a good fire in the furnace. The "night man" or "watchman" who had charge of the furnace was a high school boy who slept in the repair shop. Ashes had been raked out of the furnace that night and allowed to remain about the post above mentioned. From them the fire started, climbed the post to the main floor and first broke through the roof directly above. No other reasonable theory of the origin of the fire can be formulated from the evidence. If this evidence was believed by the jury it was sufficient to make it fairly certain that the fire was caused by the negligence of the garageman, or his employee. If it occurred (and the jury evidently so found) it was negligence per se and evidence of the custom, method of construction, heating, etc., in other garages of the same class, offered by the garageman and excluded, was immaterial.—Parris vs. Jacquith 197 Pacific pg. 749.

Garageman Not Responsible

Editor Motor World: We run a garage, automobile repair shop, have a curb pump, etc., and sell supplies and service. Among the cars stored in our garage was an old —. One day the owner went out on the road without looking

to see if there was any water in his radiator. As a matter of fact, there couldn't have been any for it got so hot and boiled so that his bearings were damaged. Now he puts in a claim on us saying it was all our fault, because if we had filled up his radiator with water, as we should have done, the car would not have been injured and damaged. Sometimes we do put water in a radiator when a car is going out, and when our man asks if they need gas or anything. Can we be held responsible?—Subscriber, Pa.

Answer—Of course you may be held responsible, for a court can do almost anything. They do some very surprising things at times, but I do not believe it at all probable, though as I say anything is possible, if your relations with your customer were the usual relations between garageman and customer and you had no special contract to render special service of this kind.

You would certainly be very foolish to pay for the damage or even make a settlement for fear of a lawsuit. That is what your shrewd friend is very likely figuring on.

Not a Transfer of Title in This Case

That a motor car seller who has never passed title to the car under a provisional agreement may recover the car back from a third party was the decision in the lately decided case of Haynes vs. Howe.

In this case Howe sued Haynes to get back possession of an automobile which the former had sold to a man named Lee, who in turn had sold it to a dealer named Soloman, who likewise in turn had disposed of it, selling it to Haynes, from whom Howe sought to get it back.

The court examining the peculiar agreement in the case, decided that there never was a transfer of title, or other than a promise to transfer it if certain things, which never did happen, should happen, and that therefore the owner, Howe, was entitled to get back the car.

Illinois Lien Law Unconstitutional

The Supreme Court of Illinois, in the case of Thurber Art Galleries vs. Rienzi, which recently came before it, decided that the Garage Keepers' Lien Act, Sec. 3a-3c, giving garage keepers a lien upon motor vehicles is unconstitutional. 130 N. E. Rep. page 747.

This Garageman Can't Find Owner

Editor Motor World: Am writing you in regard to the law on how I can handle this kind of a proposition: There were three gentlemen drove this car in my garage May 11 and wanted to know what we charged for storage. It had rained and the roads were bad. They had about 129 miles to go to their destination so they were going to stay until morning and about nine that night they decided to go on the train and got me up and I came to let them have some of their things out of the car. I did and they wanted to know if I could cash a check and I told them I had no money with me but thought I could get it cashed at the restaurant. So we went and when we were ready to cash it they had no check. They then just wanted me to let them have the money, so I wrote out the check and got the money myself and let them have \$10 and they were to come and get the car on the 14th. I have never heard from them yet though I wrote the postmaster and sent him a stamped envelope addressed to me for answer in regard to this party. I have not heard from him. Now this car is not a stolen car as I have written to the Secretary of State and he tells me the name of the party that registered this car for license corresponds with the name of the party that left the car and I want my money out of this some way. Please advise how to handle this according to law. Please rush this. —L. C. S., Ill.

Answer: I am not printing your name or the name of the town where you are located because I am afraid that there will be a general rush of Motor World readers to your garage to try and see how big an amount they can get out of you. I do not know just when I can get away but if you will let me know just how much money you have I will make a special trip if it seems worth while. Haven't you ever read in Motor World not to cash checks for strangers? A short time ago the Illinois Garageman's Lien Law was held to be unconstitutional by the Supreme Court of Illinois. If the owners demand their car back I am not sure but what they have a right to get it back in the absence of a lien law in your State.

I suggest you hold on to the car for the present and consult your local lawyer. Perhaps he can think of some way to secure you for your charges and moneys advanced. I can't!

Repairshop Shortcuts

No. 2971—Overhead Valve Spring Compressor.—An overhead valve spring compressor that can be used on any overhead valve engine using U-shaped washers is made by bending a piece of flat iron or steel stock to the shape shown, and hollowing out the ends.—Nathaniel Thatcher, Doylestown, Pa.

No. 2972—Piston Ring Vise.—The device is made of two pieces of wood with a bent threaded rod and a spring to hold the pieces apart. The slot through the wood pieces is the same angle as the slot in the ring to allow the file to pass through. It is fastened to the bench with an iron strap and a bolt.—C. W. McIlvain, Salt Lake City, Utah.

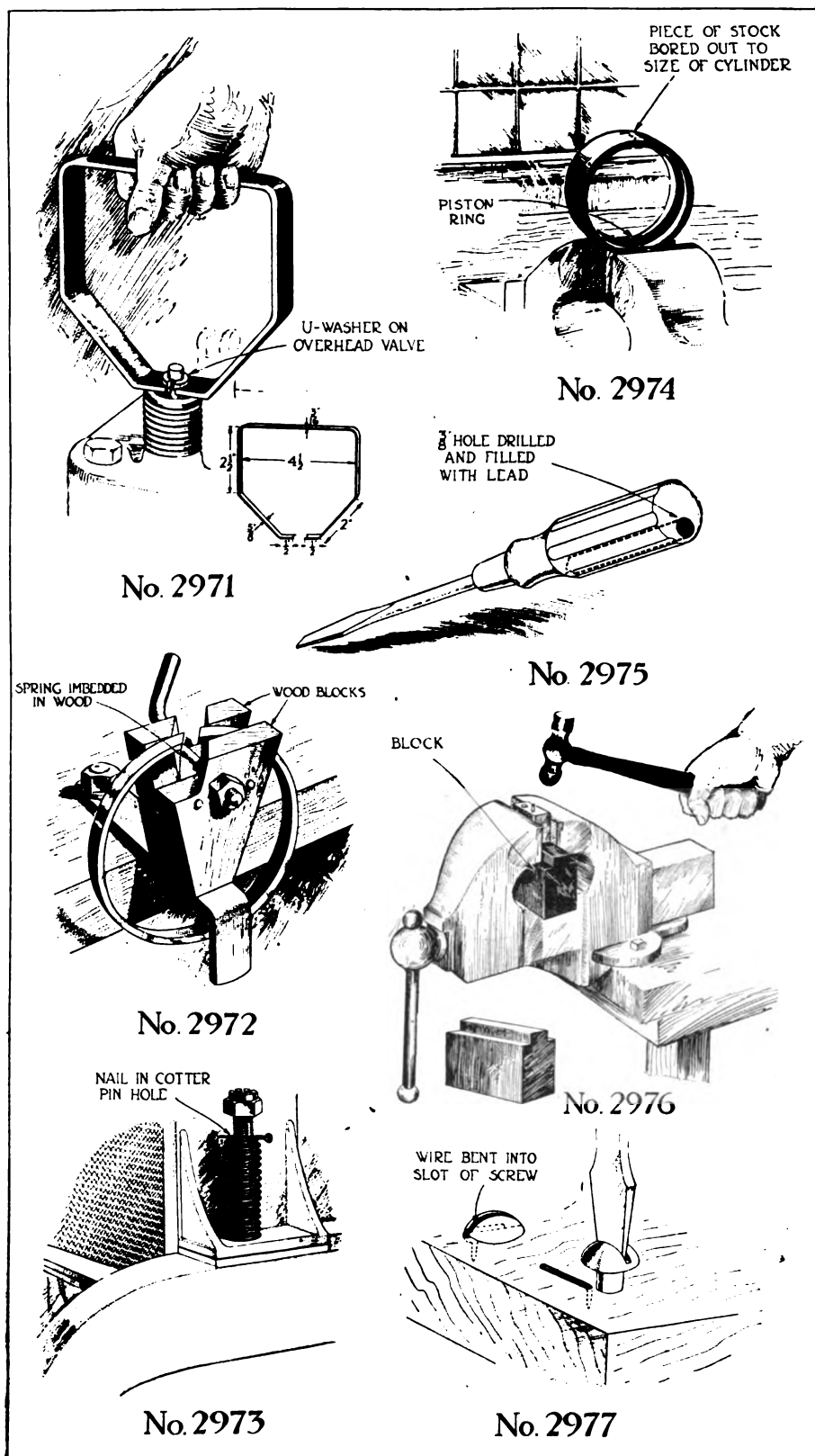
No. 2973—Starting a Nut Over a Spring.—Where a nut is to be started against a spring, a nail is pushed through the spring and then through the cotter pin hole in the stud. By turning the spring in a clockwise direction it will compress itself against the nail and the nut can be started.—J. H. Chanes, La Jara Garage, La Jara, Col.

No. 2974—Piston Ring Gage.—Where one make of car is worked on a good deal it is more convenient to have a gage made the exact size of the cylinders than to fit the rings directly in the cylinders.—H. Ralcey Miller, Auto Inn Garage, Eustis, Fla.

No. 2975—Non-Rolling Screwdriver.—A screwdriver or other wooden handled tool is prevented from rolling off the bench by drilling a $\frac{3}{8}$ -in. hole offset from the center and filling with melted lead.—Arthur G. Raabe, Long Island City, N. Y.

No. 2976—Vise Block.—A wooden block made to fit the vise under the jaws prevents work from dropping when there is any hammering or riveting to be done to it.—S. E. Gibbs, Croydon, Iowa.

No. 2977—Wood Screw Lock.—A wood screw is prevented from turning by inserting a short piece of wire the diameter of the slot in the screw, bending this into the slot after the screw is driven home.—Arthur G. Raabe, Long Island City, N. Y.



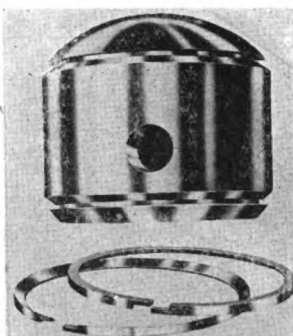
MAKE A DOLLAR

SEND in a sketch and a description of the device you doped out to make your work easier. Motor World will pay a dollar for every idea accepted for publication.

Automotive Equipment

JOHNSTON PISTON AND PISTON RING

Both rings on this piston are beveled, which is also true of the grooves in which they fit. The force of the explosion forces the upper ring down on this beveled seat and the ring is expanded out against the cylinder wall. The lower ring operates in the same manner to prevent the passage of oil. The pistons are rough machined and heat treated, and then machined down accurately to size. The set includes pistons, two rings, piston pins, piston pin retainer and reboring gage.—Johnston Piston & Ring Co., 1216 East Madison Street, Seattle, Wash.



Johnston Piston and Piston Ring

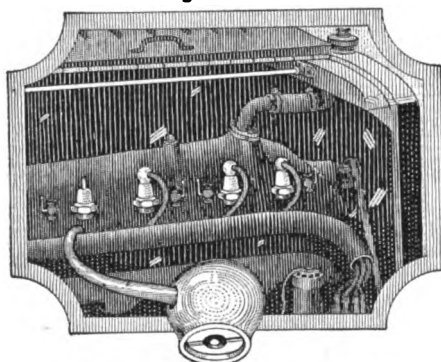


Dietz Headlight for Trucks

which is secured to the body by four screws, is drawn from the same material and comprises the second piece. There are two sockets which are spot welded to the body of the lamp. The sockets are fitted with set screws and lock nuts and are designed for a round forked bracket. The reflector is of the parabolic type and is non-rusting and nickel plated. The lens is of the diffusion type. The connector is of the adjustable focusing type, complete with metal plug, and is made of brass, nickel plated. Single or double contact sockets are furnished as desired. A 6-8 volt lamp is furnished with each light. Finish is black enamel. Diameter of the lamp is 7½ in.—R. E. Dietz Co., 60 Laight Street, N. Y. City.

THE WIEDERHOLDT TERMINAL

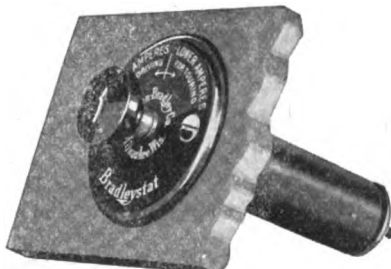
An insulated terminal for the end of the spark plug cable. The connection is made inside of a porcelain ball, so that the terminal may be handled without danger. It attaches to the spark plug connection by means of a snap fastener.—Wiederholdt Terminals, St. Louis.



The Wiederholdt Terminal

BRADLEYSTAT

The Bradleystat is a dash control for regulating the amount of charging current flowing into the battery. It is connected in series in the charging circuit. The rheostat is of the graphite compression type. It is operated by means of a handle on the dash. By using this controller and the ammeter it is possible to regulate the charging current in accordance with driving conditions.—Allen-Bradley Co., Milwaukee.



Bradleystat

NEEDLE VALVE SEALING POT

This pot has a needle valve in its base. The pot is hung from the ceiling about 12 in. above the bench. In sealing a battery the needle valve is opened and a small stream of compound is guided around the covers. When the circuit is made the valve is closed, thereby eliminating the stray drips that usually have to be scraped off. A portable burner is used to heat the compound. Price, \$3.50.—S. R. M. Orum, 5143 Keyser Street, North Philadelphia, Pa.



Needle Valve Sealing Pot

DIETZ HEADLIGHTS FOR TRUCKS

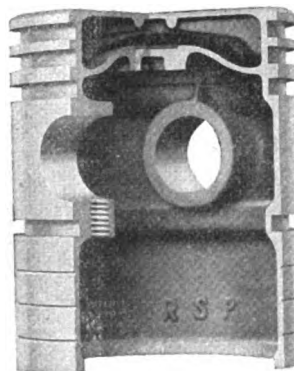
There are but two pieces in the shell of this headlight. The body of the lamp is drawn from one piece of 18 gage cold rolled steel; the rim for the lens,



C. S. Parking Lamp

C. S. PARKING LAMP

A two candle power bulb furnishes both red rear signal and white front light. The lamp is made in either polished nickel or black enamel finish. It comes with or without switch and with either single or double contact socket. Price, \$1.60.—Culver-Stearns Mfg. Co., Worcester, Mass.



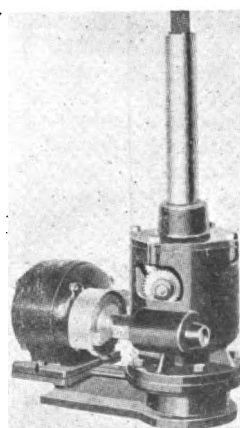
Rich Vacuum Piston

RICH VACUUM PISTON

The feature of this piston is a vacuum chamber in the head. It is believed that this chamber will effectively insulate the combustion chamber heat from the crankcase and oil below. Closer fitting of pistons is also said to be possible because of this vacuum insulation. These pistons are made for all makes of car, truck and tractor engines.—Rich Steel Products Co., 3855 Santa Fe Avenue, Los Angeles.

VAN DRESSER REBORING TOOL

The design of this tool is such that true centering is obtained without the use of guide ring. Among the features are the hardened and ground feed bar, without threads, a 9¼ in. bearing with lower end close to cylinder bore to secure rigidity, and a long ground upper shank on the reamer head with the feed bar. The reamer blades are made of high speed steel. The tool may be fed either by power or hand. Prices range from \$142.50 for the No. 1 which has a capacity of 2¼ to 3¼, up to \$216 for the No. 7 with a capacity of from 2¼ to 4¼ in.—International Purchasing and Engineering Co., 506 McKerchey Bldg., Detroit.

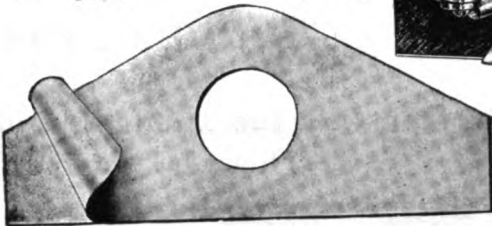


Van Dresser Reboring Tool with Electric Drive

FIT-ALL LAMINATED SHIM

A new style of laminated shim that has been designed so that it will fit nearly all shapes of bearings either as it is or with some trimming with a tinner's shears. These shims are made in different thickness and come with two different sized holes. The Laminated Shim Co., Fourteenth Street and Governor Place, Long Island City, N. Y.

Fit-All Laminated Shim



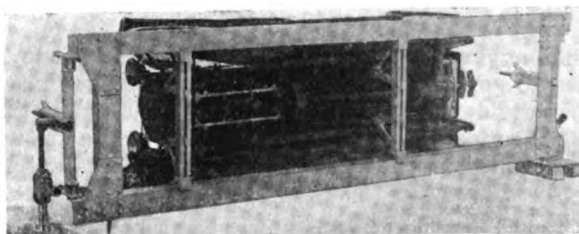
TMCO Universal Motor Mirror

The compensating ratchet holds the mirror rigidly and takes up vibration. All mirrors are equipped with a clamp for use in assembling on open cars. For closed cars the clamp is removed, the mirror being set in position with screws on the body board above the wind shield. All metal parts are constructed of brass, finished in polished nickel or black enamel. The over-all dimensions are 8 x 3 x 1/4 in. List price, \$3.75.—Tift-Martin Co., 9 West Poplar Avenue, Columbus, Ohio.

PROGRESSIVE TIRE HOOKS.

A tool for holding the casing open so that small interior repairs may be conveniently made. It is also useful in making inspections. The hooks fit over the bead and are then pulled down until each handle is locked in the small catch on the opposite handle. This tool may also be used as a base for setting the tire on a bench or on the floor. It is constructed of steel. Price—\$3.75. Progressive Shoe Machinery Co., Minneapolis, Minn.

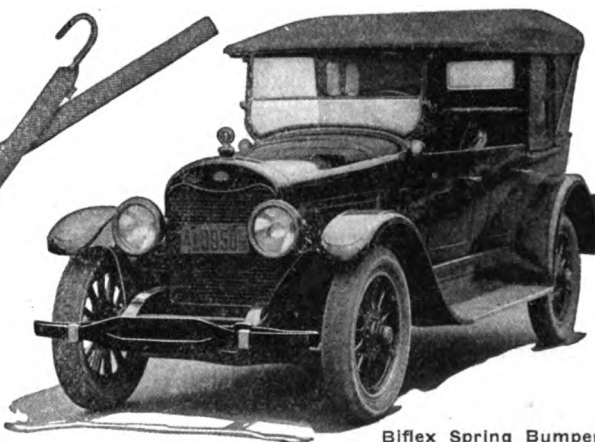
Auto Cradle



Progressive Tire Hooks

**SMITH WOODISK WHEELS**

This wheel is made of laminated wood, the grain of each layer running in a different direction. The weight is about the same as for the conventional artillery type wheel. The wheel band is shrunk on. These wheels do not require a special hub. They are made for all size of car and truck tires. George W. Smith & Co., Philadelphia, Pa.



Biflex Spring Bumper

AUTO CRADLE

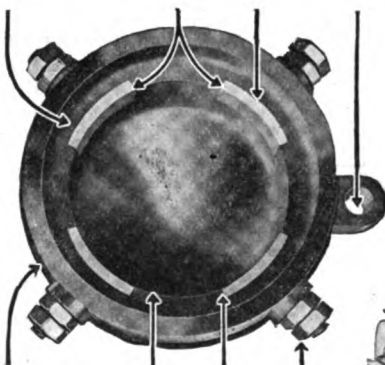
A device for lifting the automobile off the ground and rotating it so that its under portions will be accessible. The car is run on two angle iron tracks and clamped in position. Two jacks, one at each end, are used to raise it off the ground. A card is furnished with the machine which shows the height of the center of gravity of the various makes and models of cars, and the points of support are set at this point so that the car may be rotated easily. Price—\$450. Morrison Mfg. Corp. Pittsburgh, Pa.

BIFLEX SPRING BUMPER

The protective height of this bumper is increased by having the front bar made of two strips of metal, one above the other. The width is 56 inches. These bumpers are manufactured for all popular makes of cars. The standard bracket fits most cars but wherever necessary special brackets are manufactured. These bumpers are manufactured in three models, Traffic model—full black enamel, price \$26; Crescent Model—upper bar and clamps nickel, price \$27; Boulevard—full front nickel plated, price \$28. Prices west of the Rocky Mountains \$2.00 extra. Biflex Products Co., Waukegan, Ill.

CADY TIMER FOR FORDS

This timer is moulded in one piece, is of standard shape, and is said to be impervious to water and oil. The entire shell being non-conductor, there is no possibility of short circuits. The device is guaranteed against defective material and workmanship. Price \$3.00. Syracuse Spring & Specialty Co., 133 Hastings Place, Syracuse, N. Y.



Cady Timer for Fords

GEORGER AUTO TRAFFIC SIGNAL

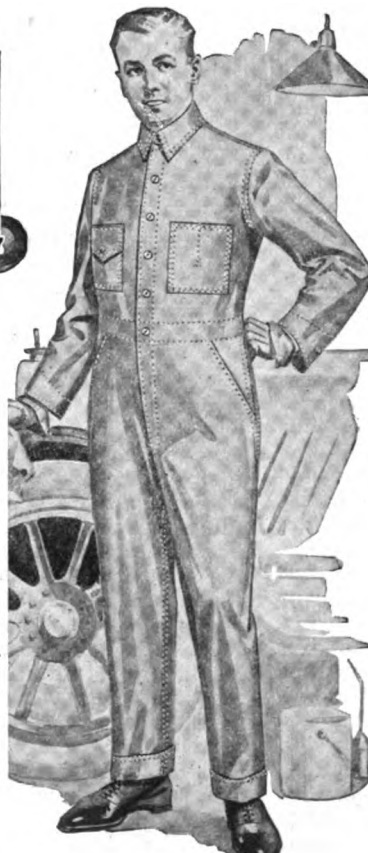
This signal is mounted on the left front fender and includes a rear view mirror. Signals are given by four semaphores lettered as follows: STOP, LEFT, RIGHT, STRAIT. At night there is a small light for illuminating the semaphores. The signal is controlled by means of buttons on the steering post. Price, \$15.—C. H. Georger, 639 Main Street, Buffalo, N. Y.



Georger Auto Traffic Signal

THE TMCO UNIVERSAL MOTOR MIRROR

A compensating ratchet adjusting rear view automobile mirror adapted to installation on either open or closed cars.



Outeralls

OUTERALLS

A special model of Outerall is made for garage and service station use. It is equipped with an extra number of pockets for carrying small tools. These garments are manufactured in eight different fabrics. The color is guaranteed to be fast. Michigan Motor Garment Co., Greenville, Mich.

McCLARREN PINION PULLER

The price of this device is \$15, and not \$5, as was stated on page 32 of MOTOR WORLD for May 25.

Local Interest

Is What Sells in the Newspaper Ad

Is Your Advertising in Step with the Thoughts and the Conditions in Your Territory? There Is Sound Advice for Dealers in This Story—Read It

IT often has been argued that advertising represents a bona fide investment that can generally be counted upon to return satisfactory dividends. Insofar as the right kind of advertising is concerned there isn't any argument to the question at all, but the principal

trouble seems to lie in the fact that a large part of the advertising that automobile and motor truck dealers are placing in their local newspapers is proving more or less of a failure for the simple reason that it is not what might be termed "the right kind of advertising."

IN the first place it is generally agreed that the "ready made" advertising copy furnished by the factories either through their advertising agencies or their own advertising departments, is what might be termed of a stereotyped variety. From the standpoint of national advertising both in argument and general appearance most of this copy is very excellent indeed, but so far as carrying any local appeal is concerned it fails utterly in that purpose. Unquestionably the best type of newspaper advertising, regardless of its nature, is that which is local in its appeal.

Insofar as conditions are concerned the prosperity of a section, or lack of it as the case may be, depends almost entirely upon the fortunes of business in that section. When agricultural conditions are mediocre in farming areas all lines of business slump as a result. Any automobile dealer in these areas will tell you that he simply cannot make sales with any degree of success in territories where crop conditions are poor. On the other hand, if crop indications are favorable then business prospers at the same time and sales may be readily made, other things, of course, being equal.

The trouble with automobile advertising that is most generally published in newspapers lies in the fact that little or no consideration is ever given to existing local conditions. To be successful the newspaper advertisement must be built from the ground up to specifically meet those conditions which may prevail in the territory covered by the newspaper in which it is published. Furthermore, this holds true regardless of whether you are advertising automobiles and motor trucks, or tables and chairs. Surely this cannot be done by an advertising man several hundred miles outside of your territory who gives no consideration to local conditions and writes the same advertisement for California that he writes for Georgia and New York.

A letter was received recently by a prominent Atlanta distributor from the factory manufacturing the automobile he sells. In this letter the factory agreed to share half the expense of an adver-

tising campaign to be carried on in local newspapers, but let it be known that the dealer would have to use the advertising prepared by the factory or they could not agree to share the expense. This particular campaign involved several thousand dollars and the dealer would



To be successful the newspaper advertisement must be built from the ground up to specifically meet those conditions which may prevail in the territory covered by the newspaper

have received the full benefit of all this advertising by paying only half the expense. Still, he promptly wrote the factory that he had found this stereotyped advertising more or less worthless from the standpoint of real results, and that he would spend his money in advertising that he would prepare himself to meet specific local conditions. In other words, he said that he was certain \$5,000 invested in newspaper advertising under his plan would return better dividends by far than \$10,000 invested in valuable space that carried the stereotyped advertising the factory wanted him to use. This dealer is now preparing to inaugurate such a campaign and while he will invest only one-half as much as would have been invested under the factory's plan, he is absolutely confident the re-

turns will be twice as great. He has been in the business for several years and he has profited much from the experiences of the past.

It is doubtless on account of the fact that the factories share a part of the expense that so much of this newspaper advertising is of a foreign nature. Until this condition is remedied automobile and motor truck advertising will never attain its highest degree of efficiency so far as the medium of the newspapers are concerned.

It is a well known fact that the automobile departments of most of the newspapers have not been eminently successful because of the foreign nature of the so-called news they most frequently publish. To accomplish the right results this news should be more of a local nature, and inasmuch as advertising is really news, and people read advertisements just as they read news, it can readily be seen that much of the automobile advertising sometimes proves more or less of a failure for precisely the same reason.

Takes Advantage of Special Week

IN Waterbury, Conn., the Merchants' Association holds periodically throughout the year a suburban week, when there is a special campaign of advertising, special merchandise offerings and special prices to draw trade in from the surrounding country.

One of the Waterbury accessory dealers always takes advantage of the suburban weeks, making special drives in his advertising and certain varieties of automotive equipment, and offering price reductions which usually run 10 to 15 per cent below list.

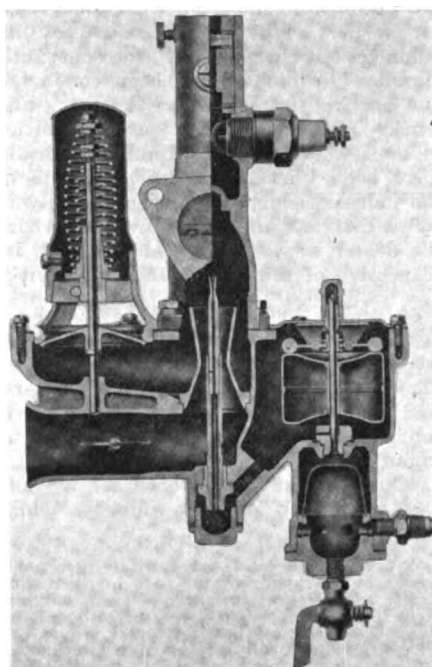
He states that the extra volume of business gained by these offerings more than offsets the money sacrificed in the price reduction.

Through these special sales he has also been able to move old stock which had been accumulating during the past two or three years through an occasional unwise purchase or mistaken calculation of demand. In all cases this old stock has been moved at a slight profit.

Packard Six Has Double Jet Carburetors

A NEW double jet carburetor is now being installed on the Packard single six and is being provided without charge as rapidly as possible for cars already in service. It is used in combination with the fuelizer and is said to give greatly increased gasoline mileage. It is designed to give automatically a mixture suitable for the needs of either heavy or light pulling.

The jet which supplies gasoline for the rich mixture is placed so far above the medium speed jet that it will not work during ordinary running, but will respond to high suction from the engine which is created by a heavy pull. Referring to the sectional view of the carburetor, the ordinary jet utilized for general driving is the annular passage located at the throat of the venturi. The secondary jet is the central tube which extends upward into the mixing chamber of the carburetor above the venturi. The velocity head at this point is considerably lower and consequently the jet does not operate at ordinary speeds. Furthermore, the jet is at a considerably higher level than the gasoline in the float chamber and a considerable pull is consequently necessary to lift the gasoline from this jet. When a high vacuum exists in the mixing chamber, such as when the engine is pulling heavily or when the velocity head increases to a high degree due to running at extreme throttle openings on a level road, the secondary jet will cut in. It is claimed that a considerable saving in fuel has been accomplished by the use of this carburetor and in the testing room of the Packard plant no engines are being passed until they can show an economy equivalent to 20 miles to the gallon under favorable conditions.



Sectional view of the double jet carburetor now being installed on the Packard Single Six

New Flexo Transmission Facilitates Gear Shifting

INCREASED ease in gear shifting and absence of clash are advantages claimed for the new Flexo transmission. In place of the ordinary type of gear shift lever, an accessible steering column control is provided. This feature is made possible by the use of a secondary clutch of the jaw type within the gear-

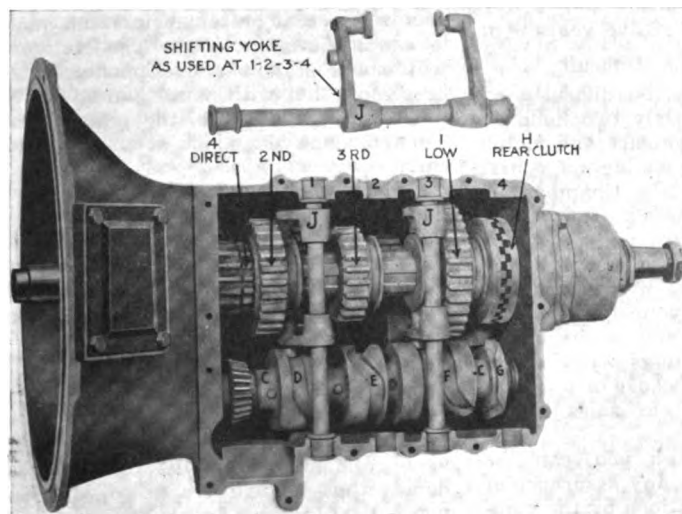
box by which the gearset is completely disconnected from the propeller shaft. The driver makes all gear changes by giving a slight motion to the control on the steering column which results in the disengagement of the secondary clutch automatically and the gears are shifted while relieved from load and positive drive. Because the gearset is unloaded at both ends by the usual power clutch and the secondary clutch in the gearset, it is possible to shift from any gear to any other gear desired, either forward or back without the use of brake or accelerator.

Referring to Fig. 1: The camshaft C is rotated by the control on the steering column. On this shaft, there are three slots, D, E and F, which actuate the gear shifting yokes J, J, J and a face cam G. As shaft C is rotated, the yoke operated by cam G disengages the rear clutch H, thus completely disconnecting the transmission shaft from the rear drive shaft. As the camshaft continues to rotate the particular set of gears corresponding to the speed desired is moved into mesh. Cam G is so timed in relation to slots D, E and F that the rear clutch H re-engages after the gears are completely meshed.

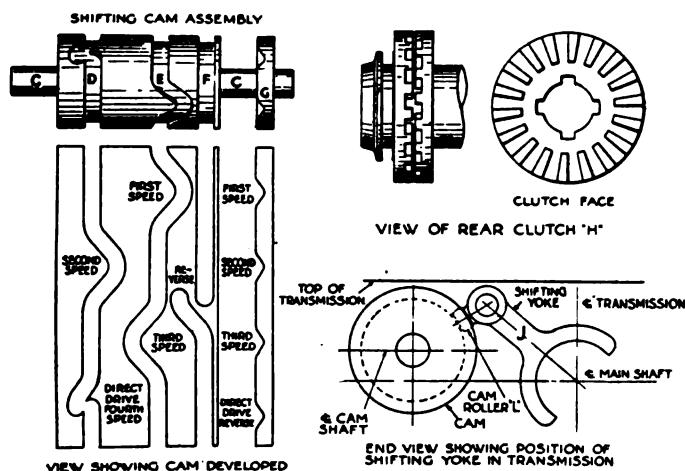
The manufacturer is the Flexo-Motive Corp., Chicago.

Rubber Receiver Named

YOUNGSTOWN, June 30 — G. H. Booth, vice-president, has been appointed receiver for the Republic Rubber Co. in a friendly suit filed by a creditor. It is charged that outstanding commitments for rubber and cotton amount to \$2,000,000, and bank loans to an equal amount. It is asserted that the company owes \$500,000 in past due notes.



A bird's eye view of the Flexo transmission with the cover removed



The cam is actuated by the control on the steering column. The clutch in the upper right hand column connects the gearset with the propeller shaft

Banker Urges Price Stabilization

GOTHAM PRESIDENT WRITES TO REEVES

Asks Aid for Dealer—Thinks New Prices Represent Splendid Values

NEW YORK, July 1—Henry H. Bizallion, president of the Gotham National Bank, which handles the accounts of more automobile dealers than all the other banks of New York combined, has written a letter to Alfred Reeves, general manager of the National Automobile Chamber of Commerce, suggesting that a marked advance could be made in the stabilization of the industry if car manufacturers would give assurances that present prices are excellent values and that no more changes are to be expected unless they are upward. He asserts that a survey made by the bank indicates that there is substantial purchasing power available for motor cars, but that buyers are waiting for the final adjustment of prices.

Reeves has asked members of the N. A. C. C. to comment on the suggestions made by Bizallion, whose letter follows:

"As we handle more automobile merchants' accounts than all other banks in New York combined, we are deeply interested in the continued prosperity of the retail automobile business. This interest is very direct in that many of these dealers have been our customers for the past ten years.

"Price adjustments in the automobile business, the same as in other lines of industry, were inevitable, and we are very glad to see that these adjustments came in much more orderly fashion than they did in other industries. According to your price lists all the readjustments seem to have been accomplished, except for a few announcements that I understand will be made around July 1. The object of this letter is to learn whether you have any assurance from manufacturers that all price readjustments shall be made by July 1, so that the public will realize that the new prices are to continue over a substantial period.

Should Prove Price Values

"Would it not be well to suggest to all manufacturers that while no guarantee may be necessary, it would seem highly important to the prosperity of the retail trade that manufacturers endeavor to prove to the public that the present prices are excellent values, that in some cases they are made at a substantial but necessary loss during the readjustment period, and that for these reasons no further changes may be expected, unless they are upward?

"During the past few years the banking fraternity has been led to look upon

the automobile industry with the greatest respect, not alone because of its volume, but because of the energetic manner in which it has been conducted and our high appreciation that cars and trucks are now permanent necessities in our American life. Banks generally have been liberal with their credits to the industry, curtailment coming only in a few districts and in a few cases where the dealer was not entitled to credit, irrespective of the product he was selling.

Only Loss Through Fraud

"We take pride in the fact that in ten years of financing automobile dealers to the extent of many millions of dollars, we have never had a dollar's loss, except in one instance where fraud was committed.

"Our interest in the retail selling field has led us to make a survey, which shows:

1. That there is a substantial purchasing power available for motor cars in particular, and to some degree for motor trucks, particularly in connection with new building operations that are now getting under way.
2. Buyers generally are waiting for the final adjustment of motor car prices, to be assured that when they do buy the price will not change a few weeks later.
3. It is the hope among dealers that all manufacturers who contemplate price adjustments will do so promptly and with the full understanding of the requirements of the next six or eight months.
4. While guaranteeing prices may have many bad features, the makers should endeavor to impress the public with the new values in motor cars and to show that the industry has now been stabilized after these mid-season price changes, that no more changes are probable and, moreover, that if there should be any further price changes it would more than be offset by the reduced value of the car which the average buyer now has to trade.

"From our survey of the field it would appear that the new prices represent extraordinary values in motor cars, because they are so little above the pre-war prices, to say nothing of the fact that many of these new models are better equipped, better made and better finished than products of five years ago.

Concerted Action Difficult

"While I appreciate the difficulty of concerted action by nearly two hundred manufacturers of motor cars and motor trucks in an industry as big as yours, the National Automobile Chamber of Commerce has been such a constructive force for so many years and the automobile industry is in so much better shape than the majority of trades in this country, that I hope your organization will undertake to convey to its members some of those things which I am prompted to suggest because of our high interest in the motor car sales in the Eastern territory.

"Can you, or through you, can the manufacturers, give us any assurance of a continuation of operations by the manufacturers on the present basis of prices and values? Some certainty along these

(Continued on page 41)

PRICE READJUSTMENT IS NOW COMPLETE

N. A. C. C. Says Industry Now on Basis to Bring Greatest Sales Results

NEW YORK, July 5—Price readjustment in the automobile industry seems to have been about completed, judging from the final report just issued by the National Automobile Chamber of Commerce which shows changed prices on the various makes of cars. The new prices in many instances go back to the figures of a few years ago, notwithstanding that the models, in many cases, are bigger with better finish and such additional equipment as cord tires and improved electrical apparatus.

In the opinion of students of the industry, the mid-year change has now stabilized the industry to a degree that is bringing increased sales to all companies. Carload shipments from the factories during April and May were 67 per cent of the production for the same two months of last year, and there is reason to believe June will be at approximately the same rate.

Compared with the feverish rush of motor cars last spring a two-thirds demand looks to be a big falling off, but compared with normal years it shows that the motor car business is faring much better than other lines.

There has been a steady demand for used cars, prices of which have also been substantially reduced. Lower prices on new cars have been offset somewhat by the reduced allowances on used cars when offered for a trade-in by the retail buyer.

Good buying power has been shown where prices have reduced or where it was known that present prices and quality would be maintained. The National Automobile Chamber of Commerce figures show that with more than 8,000,000 passenger cars in use, the replacement demand alone should be about 1,000,000 cars.

While this week may bring a few more changes in cars that have not been reduced this year, it is generally agreed that the mid-year reductions have stabilized conditions in the industry with little possibility of further changes during 1921.

Germain Denies Change

DETROIT, July 1—Leon R. Germain, vice-president of the Olds Motor Works, denies that he will resign to join Edward Ver Linden, former president of Olds, in the development of the main plant of Durant Motors at Michigan, in Lansing.

Resolution to Bar Trucks Offered

ALL A. E. F. SUPPLIES WOULD BE KEPT OUT

Measure by Illinois Congressman Fixes 300 Per Cent Duty on Material

WASHINGTON, July 1—Congressman Graham of Illinois, formerly chairman of the select committee of the House to investigate expenditures in the War Department, has introduced a joint resolution which would specifically prohibit the reimportation of surplus war supplies except at a duty of 300 per cent which in effect would be an embargo.

In a statement to Motor World to-day, Graham stated that the resolution covered all supplies sold abroad and by the Government and was drafted in order to expedite legislative action. He expects its passage in the Senate and House before the tariff bill has completed the circuit.

The permanent tariff bill, as reported out by the Ways and Means Committee to-day, contained no specific reference to reimportation of trucks as had been anticipated in some quarters. It is possible that this situation may be remedied on the floor of the House during the tariff debate when the bill is subject to amendments.

Congressman Graham stated that he was convinced that his resolution would prove more effective. Assurances have been given, he said, that the Ways and Means Committee would approve it as a special measure looking forward to the protection of domestic markets.

The joint resolution fixes a duty of 300 per cent ad valorem on all goods, wares, merchandise, military and naval supplies of any kind whatsoever originally exported from the United States for use of the American Expeditionary Force or its Allies, when reimported into this country. Graham is acquainted with the practices of European and American speculators in buying this equipment at extremely low prices, generally below cost, and reselling in this country after slight alterations or remanufacture. The flat rate will apply at American valuations.

CAR TARIFFS PRECLUDE FOREIGN COMPETITION

WASHINGTON, June 30—Retaliatory duties against countries which erect tariff barriers to stop importations of American automobiles have been provided in the permanent tariff as reported in the House to-day by the Committee on Ways and Means after six months study. The bill proposes a 25 per cent ad valorem duty on imports of automobiles, au-

tomotive bodies, automobile chassis and parts of automobiles including tires. Special provision has been made for the establishment of reciprocal relations.

The rates on automobiles are five per cent lower than the National Automobile Chamber of Commerce had recommended but sufficiently high to prevent effective competition from foreign manufacturers. The duties had been 45 per cent on higher priced cars and 80 per cent on medium priced machines. The retaliatory measure is not confined to automobiles, but it is aimed at the French and Italians who put up tariff barriers last summer with specific rates for motor cars.

TRUCK AUCTION BIDS HAVE FICTITIOUS RING

NEW YORK, July 1—Auction of 200 reconditioned army trucks reimported into this country by the Truck Co. of America was held June 29 and 30. Judging from the first day's sales there was very little participation in the bidding by the public and the sale prices were seemingly fictitious. Macks of 5½-ton capacity sold for \$2,500; 3½-ton Packards sold for \$2,000; chain-driven 3-ton Whites for \$1,900 and 4-ton Rikers for \$1,800.

In the opinion of prospective buyers on the floor, to-day's prices did not indicate anywhere near the true valuation of the trucks. A representative of one of the large truck manufacturers stated that his company was given the opportunity to purchase a certain make of truck in lots for \$350 each.

Each truck was sold with a guarantee against defective parts within 30 days of the purchase. Arrangements were made by the auctioneers for the sale of the trucks under the part payment plan, representatives of finance companies being on the floor.

DOWELL BILL PASSAGE SNAG IN ROAD ACTION

WASHINGTON, June 30—Highway legislation has struck a snag here owing to the passage of the Phipps-Dowell bill in the House this week, providing for continuation of the Federal aid system with a system of interstate roads and a commission to direct the work.

The Senate had this bill and the Townsend bill pending. It is a question of parliamentary tactics which shall have the right of way in the Senate. It is believed that Senator Townsend will effectively block the Dowell bill in the Senate unless the essential principles of his measure, endorsed by the National Automobile Chamber of Commerce and other automotive organizations are accepted in amendments.

TARIFF ONLY MEANS TO CURB DUMPING

Problem Beyond State Department Jurisdiction—Congress to Drag Up Clause

WASHINGTON, July 2—Indications are that the House Committee on Ways and Means will dispose of the reimportation evil, which has affected automobile dealers more than anyone, by a special clause embodying it in the permanent tariff bill as a principle of protection rather than a specific class legislative measure. Incorporated in the anti-dumping provision, it would be the only practicable and available method of checking the resale of American trucks in this country by foreign sales agencies, which purchased them as surplus army equipment. The Motor World correspondent was advised by high official sources that diplomatic efforts to adjust the situation had failed and it became solely a legislative matter.

It was learned that this Government had made representations to the Government of France, but was subsequently advised that the French authorities were powerless to prevent reshipment of American trucks and other goods. The correspondent was told that inasmuch as admission into or exclusion from the United States of these products is not covered by contractual or treaty stipulations under the administration of the State Department, or within jurisdiction of Congress, it is not accurate to imply that the State Department objects or has objected to efforts looking toward restriction of sales of trucks or other army supplies.

Dealer Action Unopposed

In other words, the State Department has entered no objection to the campaign of American automobile dealers and manufacturers to prevent reimportations, as had been currently rumored in the trade. The fact that they had discussed the matter diplomatically with the representative of the French Government shows that they were endeavoring to present the American business man's side of the problem to foreign governments, whose nationals had purchased army supplies for speculative purposes.

It is believed that members of the Ways and Means Committee are in sympathy with the plan to protect the American market. As nothing has been adduced to show that the Commission which disposed of the surplus material made it obligatory upon the purchasers to sell countries other than the United States, it is a matter which Congress must decide.

WILL MARKET NEW DURANT AUGUST 1

**Designed for Low Maintenance
Cost—Has Several Unusual
Features**

NEW YORK, July 1—Production of the new Durant car will be started at the Long Island City plant about Aug. 1. It is understood that approximately 20,000 orders for the car already have been received from the eastern territory. This will keep the plant running at full capacity for a year. Experimental work on the four cylinder car which will sell for \$890, has been completed and it is practically ready for inspection.

One of the main advantages of the car, its makers contend, is the low maintenance cost which will result from the remarkable accessibility of its various parts. Another point in its favor is said to be the unusual number of refinements in body design. More than the usual amount of leg room is provided in the front seats and the same is true in the rear. The car, which will weigh 2300 lb. fully equipped, will be rated at 24 horsepower and will develop a speed of 50 miles an hour on a level road. Tests have demonstrated that it will average 17 miles per gallon of gasoline.

One of the principal features of the chassis construction is the use of two tubular struts between the cross frame members. These are used not only to stiffen the frame and take out a good deal of the weave, but are also used in place of the exhaust pipe and muffler. These simply act as an expansion chamber and there are no baffle plates used in the construction.

The engine is a 4-cylinder block type,

made by Continental especially for the Durant car. The valves are of the overhead type, are enclosed, and the exterior of the engine is very smooth and clean. Ignition is by a battery system and the coil is mounted on top of the timing gear case. Servicing has been very carefully considered and all the members including engine, clutch and gearbox can be removed without disturbing any of the other members. The oil pump is of the rotary type, very small and is on the outside of the crankcase at the right, with the water pump being on the left side. Aside from these, and the coil, there is practically nothing on the outside of the engine. The clutch is of the plate type with a single steel disk which is slotted to allow for expansion under heat and prevent warping of the plate. The plate has a molded asbestos floating ring on each side and the entire assembly is taken out by taking the cap screws out of the cover plate which carries also the expanding fingers.

Appointments Handsome

The instruments are mounted on a sheet steel instrument board painted, varnished and grained to represent circassian walnut to correspond with the rest of the wood work. The steering wheel is solid walnut and the spider is partly aluminum and partly walnut.

The axles are fitted with Timken bearings, and the rear is of the three-quarter floating type. The carburetor is a Tillotson. Springs are semi-elliptic and the extra tire carrier on the rear is so mounted as to make a very stiff job. The tires are 31 x 4 and are on artillery wood wheels.

The body appointments are very well looked after and there are pockets in each door, each one accommodating the curtain which goes directly above it.

SAYS ARMY TRUCKS STIMULATED SALES

**Roads Bureau Declares Use of
Highways Has Been Aid to
Dealers**

WASHINGTON, July 1—Distribution of surplus trucks, passenger cars and tractors from the Army to the various highway departments has stimulated sales and developed service rather than retarded the trade, according to the opinion expressed to-day by officials of the Bureau of Public Roads. Emphatic denial was made that the Government had distributed unserviceable motorized equipment to the States, and it was pointed out that all unserviceable vehicles were sold under the auspices of the Motor Transport Corps. The Federal Agency stated that no highway equipment was dispatched to the various State highway officials except upon requisition and after a complete inspection and report had been submitted. The Bureau of Public Roads will have approximately 4000 army trucks of varying sizes and 1800 passenger cars to dispose of under the terms of the Army Appropriation Act, which went to the President for his signature this week.

It is the contention of Government officials that the automobile industry, as a whole, particularly the motor truck section, has materially benefited from the distribution of surplus war material. It is stated that handing out approximately \$80,000,000 worth of samples must eventually bring returns to the manufacturers and dealers. As an illustration, it is declared that one American truck manufacturer had restored confidence in his product by the development of service in the various States where the equipment had been placed.

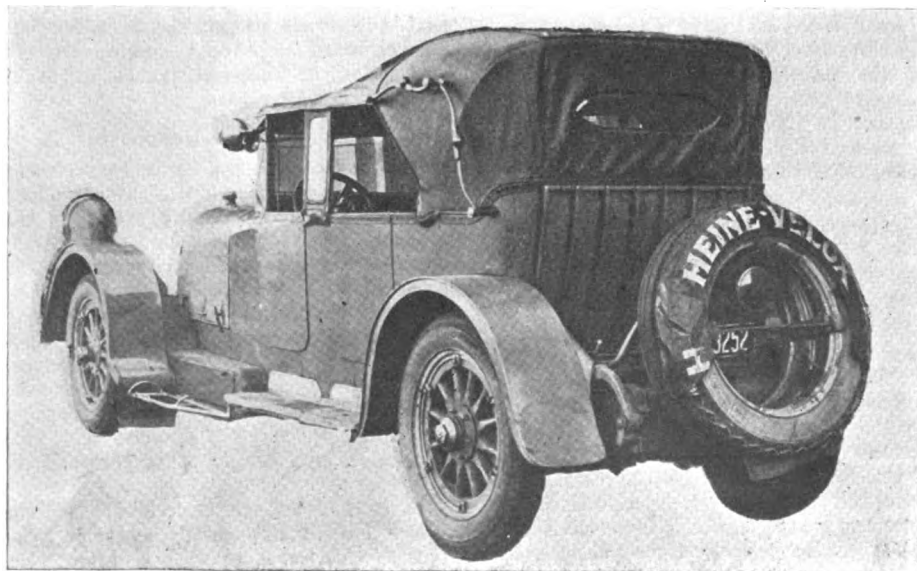
This motor vehicle had been condemned as inefficient for several months prior to the armistice, but it soon proved its worth when put to domestic uses. In fact, one State which had accepted the consignment of trucks, reluctantly finally adopted it for standardization purposes and has expressed a preference for the models manufactured by this particular company. It is further declared that these trucks actually in use and giving as satisfactory service as could be reasonably expected because of their present physical condition, makes it easy for a truck salesman to sell newer models to the State officials.

87 Per Cent Delivered

The statement of allotments and deliveries of trucks, Fords and other automobiles from surplus war materials to the several States and retained by the Department of Agriculture to June 1, 1921, shows that the deliveries amounted to 27,983 vehicles, of which 21,115 were trucks; 2770 Fords, and 433 other automobiles, making a total of 24,318 vehicles, or 87 per cent of the total allotment.

The Bureau of Public Roads insists that State highway officials are fully advised as to the condition of all vehicles before they are shipped.

Heine-Velox, a Western Product



This is an exceptionally large and well appointed model with 148 in. wheel-base, made by the Heine-Velox Engineering Co., San Francisco, Cal. The car has been built in limited quantities for a long time, but the earthquake a number of years ago wiped out the factory and all work was discontinued until last January. It is expected that factory facilities will be increased. The bodies are custom built and prices range up to \$25,000

BIG DODGE COLONY COMES INTO N. A. D. A.

Moock Tells of Results from Matheson's Drive for New Members

ST. LOUIS, July 1—Interesting information about the activities of the National Automobile Dealers' Association in behalf of dealers who have been overcharged on freight and by the widespread policy of Dodge Brothers dealers with the N. A. D. A. is contained in a letter to Dodge dealers sent out by Harry G. Moock, general manager of the association. Moock says:

"We thought you might like to know something about the 'Dodge Brothers dealer colony' in the National Automobile Dealers' Association.

"Some weeks ago we put the story of the N. A. D. A.'s accomplishments before Charles W. Matheson, sales manager of Dodge Brothers, and we told him also of the general plans for the future that the N. A. D. A. has. Mr. Matheson was so impressed that he said ALL Dodge Brothers dealers should be in the ranks of the N. A. D. A.

"So he sent some letters to Dodge Brothers dealers and now we have 297 Dodge Brothers dealers in the association.

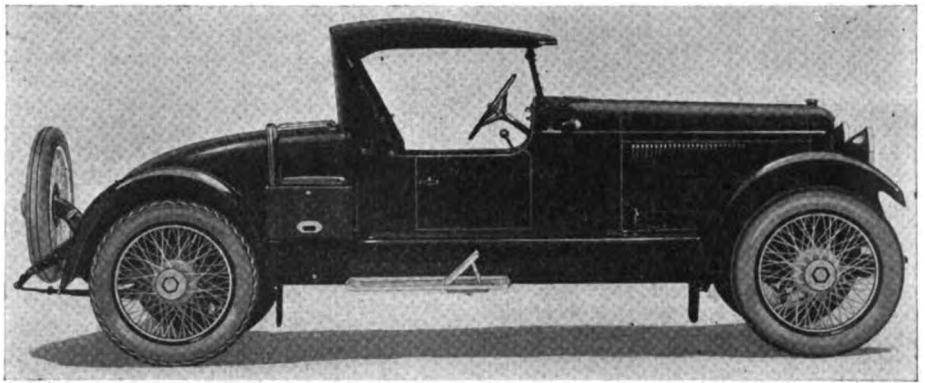
"Just a word, though—In addition to the broad policies for which we are working for the benefit of the whole industry we do a number of things for the benefit of the individual dealer that he can count on his cash register. For instance, we have this letter this morning from the R. D. Britton Co. (Allen and Velie) at Hartford, Conn. Mr. Britton writes:

"We have received a check for \$140 in payment of our claim for damages to cars. This is in addition to the previous claim you collected for us for overcharge in freight on these same cars, making a total amount which you collected for us on this one shipment of \$413.15. We greatly appreciate these splendid results."

Not Tossing Away \$500 Bills

"No automobile merchant is tossing away \$500 bills now. Maybe you have some freight bills you suspect of overcharge, or damage claims upon which you can get no action. If so, send them in.

"But what we started out to say was, we certainly welcome you Dodge dealers to the folds of progressive automobile merchants and we take this opportunity of telling you that we think your general sales manager, Mr. Matheson, did a mighty big thing and a mighty necessary one for the industry when he asked all Dodge dealers to get in. And remember, that the prime purpose in this automobile industry, whether association, factory or dealer, is that all elements, manufacturer, distributor, dealer, parts maker, service station and repairs are working together."



Paige-Detroit Adds Daytona Roadster

Following the record made at Daytona by the Paige 6-66, the Paige-Detroit Motor Car Co. has added a new body to the line on that chassis; this is to be called the Daytona Roadster. It is primarily a sportsman's job but the skeleton equipment ordinarily found on racy-type models is replaced with comfortable seats and equipment. There is an auxiliary seat on the side of the body with foot rest on the aluminum step. Wheels are wire with 33x4½ cord tires. The finish is deep red for the body, wheels enameled in blue and other running gear black. Other equipment includes bullet side lamps, cowl ventilator, safety latches on doors, electric clock and muffler cutout.

INSURANCE companies, generally speaking, are at present not in favor of accepting business from automobile finance companies. Automobile losses, like "fire sales," are conspicuously frequent during periods of business depression. Insurance companies are selecting business carefully, whereas finance companies require blanket coverage.

CAR INSURANCE FREE IN MISSISSIPPI SUIT

JACKSON, MISS., July 2—The writing of automobile insurance in Mississippi is not affected by the three and one-half billion anti-trust suit brought by State Revenue Agent Stoves V. Robertson against fire insurance companies formerly doing business in this State, according to a statement by Hon. William Hemingway, assistant attorney general.

The litigation, said Hemingway, was brought by the revenue agent against fire insurance companies exclusively and, therefore, does not in the least apply to automobile risk.

Contrary to reports, automobile underwriters are still carrying on their business as formerly in Mississippi and, according to expressions of many individual concerns, the general outlook was never better.

Oneida Increases Schedule

GREEN BAY, WIS., July 1—The Oneida Motor Truck Co., Green Bay, Wis., resumed operations on June 6 on a production schedule of 30 to 50 trucks per month, with a working force of about 60 per cent of the normal prior to the shutdown several months ago. Shortly after Jan. 1 it was found necessary because of business conditions to reduce the force 75 per cent or more.

NEW ZEALAND DEALER NOW BASEBALL FAN

NEW YORK, July 2—W. Stuart Wilson, Ford dealer in Wellington, New Zealand, has left for home via England and the Continent after a month's stay in the United States which included visits to several automobile plants and merchandising centers. Wilson started home filled with automotive merchandising ideas gleaned during his American trip and also with an ambition to make baseball the national game in New Zealand.

During his stay in this country Wilson saw professional and amateur baseball games and declared afterward that he knew of no sport which would do so much to bring a people closer together and to cultivate both physical and mental qualities. He declared his intention of setting about on his return to New Zealand to raise a fund of several thousand dollars to equip a number of New Zealand amateur teams. Before he left New York he shipped to his home town a consignment of balls, bats, gloves and other baseball paraphernalia with which to get the American game under way in the Antipodes.

Wilson expects on his return home to enlist the support of the newspapers and business men in sponsoring the introduction and extension of baseball.

Wilson reported a gradual improvement in business conditions in New Zealand.

Durant Offices Moved

NEW YORK, July 1—W. C. Durant and the headquarters organization of Durant Motors, Inc., is now settled in its permanent location on the 11th floor of the new Gotham National Bank Building, at Broadway and Fifty-ninth Street. Admirers of Durant signalized the move by sending him quantities of flowers which greeted him when he reached his office Monday morning.

FIRST CONVENTION FOR TIRE DEALERS

*Will Be Held in Cleveland in
October—Tire Exhibition
Is Proposed*

CLEVELAND, July 1—The first convention of the National Tire Dealers' Association will be held in this city on Oct. 18, 19 and 20 at the Hotel Winton, which will be headquarters for the delegates.

A tire and tire accessories exhibition—the first of the kind to be held—will be conducted here while the convention is in session.

These two decisions were reached at a meeting of the board of directors of the National Tire Dealers' Association, which was held in this city June 21 and 22.

Resolutions placing the association on record against producers of tires or their representatives holding financial interest in retail stores and pledging the officers of the association to obtain data on offerings of standard tires at attractive prices and then forward same to members of the trade body were adopted by unanimous vote.

Members of the board present included: Thomas F. Whitehead, Chicago, president of the association; R. F. Valentine, Cleveland, vice-president; H. O. Stenzel, Milwaukee, treasurer, and Philip O. Deitsch, Cleveland, secretary.

The offer of the Cleveland branch of the national organization to finance the expense of the convention and to arrange an attractive program was responsible for the decision to meet here. The proximity of Akron, the center of the rubber tire industry, also was a controlling factor. There will be from 700 to 900 delegates in attendance, and Secretary Deitsch announced that a general invitation to all wholesale and retail tire dealers, regardless of whether they are affiliated with the organization, would be issued.

Factory Visit to Be Feature

Akron manufacturers will provide motor transportation for a trip by delegates to the Rubber City, and part of a day will be spent in the larger tire producing factories in that city, so that all delegates may return home with some new talking points for their products and a better understanding of production methods.

To Valentine was delegated the responsibility of arranging the program for the convention and also for the tire and tire accessories show. He will announce committees shortly. Efforts will be made to obtain exhibits from every tire and tire accessory producer in America. While the features of the show have not been decided upon, already there is talk of inducing some producers to stage various phases of production. Educational features, such as lectures and demonstrations, to help the wholesale and retail tire dealer in

his work are to have places on the program.

Under a resolution adopted the secretary was directed to compile each month inventories of stocks in business establishments of dealers and distributors. The record so made up is to be given members of the association and manufacturers as a means of informing both on conditions in the trade.

Officers of the association have received many complaints from dealers relative to a certain producer of tires being financially interested in service stations scattered throughout the larger cities and along highways that are traveled to a large extent.

Association to Buy up Tires

Executives of the association also were instructed to watch keenly for opportunities to purchase standard tires at low prices. It frequently happens, according to information received at headquarters here, that producers of automobiles when forced to cut production of cars are caught with large stocks of tires. When their bankers ask them to liquidate their inventory, they proceed to dump tires on the market at reduced prices. The dealers want the first opportunity to purchase these tires.

Copies of the resolutions adopted will be mailed to car makers, tire producers and the national trade organizations of each.

HOW TO GET MEN AND RESULTS

(Continued from page 11)

ard sizes. Everybody talks cord tires to everyone who comes into the establishment. The result is an immediate increase in sales.

The suggestion idea is carried further. A man comes in for a new roller bearing. He has brought the old one with him to match the size. The salesman gets the part and asks concerning the condition of the sleeve. Probably the man says: "Why, I never looked at the sleeve, but when I get home I will look at it, and if I need a new one, I will come back." The ordinary salesman might collect the money for the bearing and let it go at that, but not one of Hatfield's. He instead says, "I tell you what, it is more than likely that with the bearing in its condition, the sleeve is worn. You take one of these sleeves out with you and if the old one is in serviceable condition, bring it back." The man takes it along and puts it in, generally, where had he not had the sleeve with him, he would have just let the old one do for some time.

Because parts are merchandise, the department is right on the ground floor. *If any one has to wait on deliveries from the parts department it must be the workmen on the upper floors and not the cash purchaser who is standing at the counter.* The parts department is just back of the accessory department with its big display cases, where he who desires spare parts must pass by displays of accessories that make him think of something else he should have.

CHICAGO TERRITORY HAS BIG TIRE SALE

*Price Reductions Stimulate
Buying—Farmers Are Again
in Market*

CHICAGO, July 1—Direct reports from the large tire distributors in the Chicago territory, which in most cases covers three or four states (Indiana, Illinois, Wisconsin and Iowa), range through all the degrees of business activity from "good," which represents zero, to "three times the volume of business we were doing a year ago," which is the summer heat point without any shade. It is confusing to try to account for these widely ranging reports of business conditions, and it is just as satisfying, perhaps, not to try to account for the statements, and say that the tire business in this territory is unusually good and far beyond anything that the distributors thought they had a right to expect. The pick-up came very suddenly and at once grew into substantial, healthy and steady sales volume.

Price reductions in all the standard makes of tires have had the heaviest influence in stimulating sales. Cars that were running without "spares" are fast adding extra tires; old tires that were given long mileage during the long open winter are now being replaced with new ones. The present weather is having its share also in tempting motorists into the open and long trips are not attempted without extra tire equipment. The orders from dealers are heavy and it is the opinion here that the tire business will continue good throughout the summer and fall.

Throughout the corn belt in the Middle West there is a disposition on the part of the farmers to buy tires. This tendency on the part of this enormous potential market is taking hold slowly, but is noticeable and growing steadily. This condition is particularly encouraging in the Northwest where farmers are selling wheat regardless of all advice to the contrary. They are marketing their grain at prices from \$1.25 to \$1.30 a bushel and taking tires home with them. There are reports from spots in the rural sections where buying is at a standstill caused, it is said, by the fact that country banks have begun to realize on the farmers' notes they have been holding. With all conditions taken into consideration, farmer trade is on the increase, and by early fall it is thought this trade will have reached its climax.

Steel Merger Off

CLEVELAND, June 30—Upon recommendation of the directors, stockholders of the Hydraulic Steel Co. decided to take no action on the plan for a merger with the Detroit Pressed Steel Co. This automatically holds up the proposed increase in the stock of the corporation to enable it to purchase the stock of the Detroit company, according to R. D. Mock, vice-president of the Cleveland steel corporation.

PORTLAND LOOKS FOR BIG JULY BUSINESS

*Will Base Active Sales Campaign on New Prices—
Dealers Hold Outing*

PORTLAND, ORE., July 1—That price reductions are nearing an end and that the automobile industry is getting back to a more stable basis than at any time since last summer a year ago is the belief of the Portland automobile dealers, who are already laying plans for active sales effort during July. With the exception of a few stragglers who are expected to drop about July 1, it is believed the automobile situation has adjusted itself and that the uncertainty which has pervaded the market during the last month or six weeks is due to be a thing of the past.

Price reductions have been, of course the principal object of attention on the part of the dealers for some time, and Portland dealers do not deny that the general uncertainty has slowed up sales materially, or rather postponed them, for it is felt that there are an ample number of buyers, but all must be persuaded that the rock bottom has been reached and that the time has arrived to sign on the dotted line.

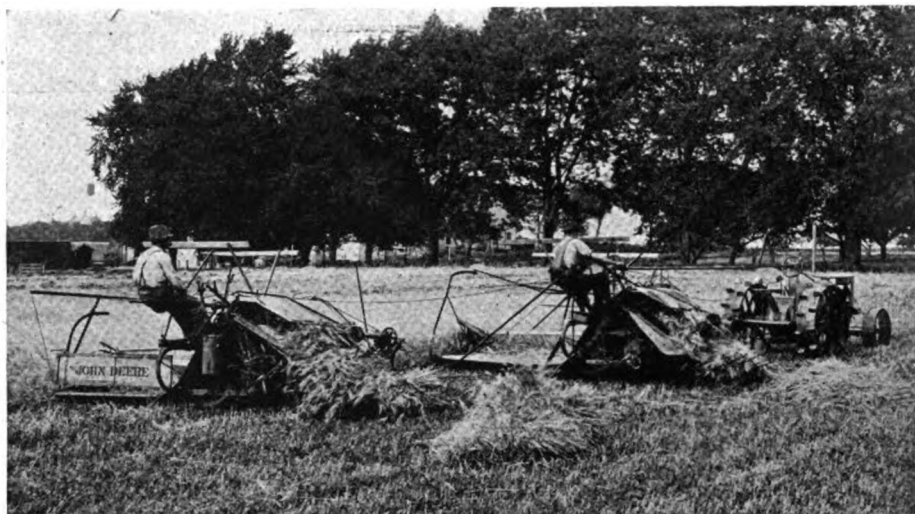
Opinion among the Portland dealers is that the price reductions have not aided in sales, but it is believed this will last only until the public is assured that the bottom has been reached, after which there should be a general improvement. Some of the dealers, notably the Dodge and the Ford aggregations, have been benefited materially by the drops and have increased sales markedly.

Willamette Motors, Inc. one of the well-established firms along automobile row here, took over the Scripps-Booth distribution for Oregon and the retail for the city of Portland last week. The deal was closed with L. A. Hannan, Northwest manager for the Scripps-Booth Co. of California, Pacific Coast distributors. Willamette Motors formerly had the retail of the Oakland, but lost that when the Northwest Oakland wholesale organization, which has headquarters in Portland, decided to take over the retail here.

Portland automobile dealers enjoyed their first summer sociability tour last week end, when several score carloads of dealers and friends went to Seaside for Saturday and Sunday.

GARDNER PLANS CHANGE IN SOUTHWEST BUSINESS

KANSAS CITY, MO., July 1—F. G. W. Sudrow, formerly president of the Sudrow Motor Co., Inc., has sold this company to H. D. Fonken, who has consolidated the Sudrow company's distribution of the Gardner car in northwestern Missouri with his own distribution of this car in eastern Kansas. Headquarters for the Fonken company will be at the Sudrow establishment, Kansas



Extension Control on Wallis Tractor

Extension control designed for installation on the Wallis tractor. Steering is by means of a long shaft provided with a universal and telescope joints, and the clutch is controlled by means of a rope

City, Mo. Fonken will discontinue the retail store in Westport, part of Kansas City, Mo. Sudrow has been made southwestern manager for the Gardner Motor Co., Inc., St. Louis, and will make his headquarters at the Fonken offices.

The change in Kansas City reflects the changes which Sudrow will effect in the distributive program of the Gardner in the Southwest. Heretofore, local dealers have made contracts with the Sudrow company, southwestern distributors. Hereafter, local distributors will have a few counties, and make contracts with the manufacturing company, through Sudrow.

SPECIAL SALES KEEP PHILADELPHIA BUSY

PHILADELPHIA, July 2—Small and inexpensive automobiles are selling well here now, although there is as much hesitancy in the larger makes as ever. Trucks are not moving perceptibly in new models. Accessory sales are picking up in spots. Service stations and repair shops are being overworked, a sign that general sales are stagnant. Department store methods of display and "special sales" are being employed in both daily and Sunday newspapers in an effort to push passenger car sales.

Tool Plants Merge

WORCESTER, MASS., July 1—The Worcester Electric Tool Corp. has taken over the business formerly conducted by the Stenman Electric Valve Grinder Co., Inc., the Stenman Electric Tool Co. and the Consolidated Machine Tool Co., all of Worcester. The Worcester Electric Tool Corp., which was organized to take over the three concerns, is headed by H. P. Gleason. A. G. Sandberg is treasurer, J. J. Kelleher is sales manager and Harold Paine, advertising and service manager. The principal products which will be featured for the present are the HusKee service tools and drills.

SANTRY THROWS OPEN NEW NASH BUILDING

*Is Monument to Importance of
Service to Sales—Builds
for Future*

CINCINNATI, July 1—The new sales and service building of the Nash-Cincinnati Motors Co., one of the finest structures of its kind in America, was formally dedicated last week by C. W. Nash, president of the Nash Motors Co. C. B. Voorhis, vice-president and general sales manager of the company; W. H. Alford, vice-president, and E. C. Howard, vice-president and sales manager of the LaFayette Motors Co., also participated in the dedication.

The building stands as mute evidence of the policy of Frank J. Santry, president of the Nash-Cincinnati Motors Co., to render service in keeping with a high-grade product. Dealers representing Nash and LaFayette interests in all points of Cincinnati territory gathered about the banquet table.

The entire week was devoted to the "house warming," a general invitation having been extended by Santry for a public inspection of the new building.

Appreciation Makes Growth

"The appreciation of Cincinnati motor car owners of the value embodied in Nash and LaFayette products, and in the service rendered by our organization, is responsible for the steady growth of our business in the past three years," said Santry. "We take real pride, therefore, in offering to our owners this new home with its adequate facilities for service.

"We could sell many Nash and LaFayette cars from an office on an upper floor of a downtown building, but the matter of service is of much greater importance to the customer than sales quarters.

BUSINESS "SPOTTY," PARTS MAKERS FIND

Heavy Retail Sales Not Yet Fully Reflected in Their Orders

NEW YORK, July 1—Notwithstanding the almost phenomenal sales of motor cars at retail in most sections of the country, the excellent trade of distributors has not been reflected fully in the business of parts and accessory makers. This would seem to indicate that numerous car manufacturers had on hand a considerable number of surplus cars when they suspended, in a large measure, the buying of materials late in May.

The business of parts makers is exceedingly spotty. Some of them are keeping fully abreast of their May business while others report there has been a sharp falling off in orders. Most of them have two or three motor car companies which are good customers, but are getting little business from others which previously have been on their books. It is probable, however, that the latter half of June will show a greater volume of business than the first half.

Reports from Detroit and other cities are to the effect that some parts plants which had contemplated a shutdown at the beginning of July, ostensibly for inventory purposes, will continue operations through the month, although on a somewhat reduced scale. Many of the car makers have found it necessary to increase their schedules to meet the demand for cars resulting from increased sales due to price reductions, and this ultimately will reach back to the men who supply them with materials. Several automobile companies have orders on hand which will keep them running through July.

It is certain that the slowing up of the industry in July will not be so marked as was expected a month ago. Underlying conditions are thoroughly sound and there is reason to believe that after the middle of September there will be a steady upward trend.

Credit Conditions Still Weak

Credit conditions, especially in the smaller cities, are not entirely satisfactory. While the banks have more cash available than for many months, they are loaning it with the utmost caution, and many manufacturers are having considerable difficulty in obtaining funds with which to finance the orders they are receiving. There is a tendency on the part of many bankers to send their surplus funds to New York for use in Wall Street because loans there are considered safer than for industrial purposes.

Parts makers generally, however, report collections for June better than for any month this year. There has been a continued whittling down of past-due accounts. A general gain in orders is thought likely to follow the mid-year inventory period now under way at the factories.

COURT RULES RETURN OF CONFISCATED CAR

INDIANAPOLIS, July 1—Restoration of an automobile to Otto S. Wilson of Chicago was ordered by Judge Geiger in Federal court this week. It had been confiscated by revenue agents when James Schaller of Chicago was arrested charged with illegal transportation of liquor. Evidence placed before Geiger was that the revenue agents had turned the car to their own private and official use. He gave a severe reprimand to the agents in ordering the car restored to Wilson, who proved his innocence of complicity. Wilson is suing the revenue agents for \$700 damages to the car while in their possession. Judge Geiger said he hoped Wilson would get a judgment.

BIG PRODUCTION JUMP BY WILLYS-OVERLAND

TOLEDO, July 1—Willys-Overland Co. will increase its July production 50 per cent over that for June, setting the output at 12,000 cars as a minimum. It is announced at the plant that production will be speeded up to surpass this by several hundred cars if it is mechanically possible.

Production of model 4 and Willys-Knight cars actually completed or scheduled for this month and July is already sold. Sales from May 16 to June 15 aggregated 18,000 cars. Actual deliveries the first two weeks of June exceeded 6500 machines.

FORD MAY BUY BIG GOVERNMENT PLANT

DETROIT, July 1—Henry Ford has inspected the immense Government nitrate plant at Muscle Shoals with a view to buying the property. This was admitted at his offices to-day, but all further information was refused. There has been no intimation as to what disposition would be made of the plant if he acquired it. Completion of the great Wilson dam and carrying to a conclusion of the original plans of the Government for the production of nitrate, would provide enormous quantities of nitrate for fertilizer and would be a great boon to the farmers of the United States.

Mrs. Dodge Gets \$500,000 a Year

DETROIT, July 1—Judge Edgar O. Durfee in Probate Court has allowed Mrs. Ann Thompson Dodge, widow of Horace E. Dodge, the automobile manufacturer, \$500,000 for one year's living expenses. This action was taken as a result of a petition filed by Mrs. Dodge in which she declared that in the seven years preceding his death her husband had spent more than \$1,000,000 annually for the living expenses of his family.

TIMKEN CONCLUDES NOT TO SHUT DOWN

Orders Cause Change in Plans —Other Companies in Same Position

DETROIT, July 1—Decision to close the Timken Detroit factory for a month beginning to-day has been altered as the result of orders coming in steadily, which will necessitate operation of the plant on the present basis of 1/3 normal for the next 60 days at least, according to General Manager Fred Glover. Orders are coming through every day, Glover said, and though in small volume are sufficient to keep the factory working.

The same is true of Continental Motors which, although no definite closing date had been fixed, had anticipated a slowing up around July 1, with a possible temporary shutdown. Vice-President G. W. Yeoman said the plant would continue to operate on the present basis and all indications point to a steady demand. Yeoman reiterated his statement that the company would operate just as long as compelled to by incoming orders and from time to time might shut down for two or three-day periods, though no general closing down was anticipated.

The same attitude is apparent at the Hupp Motor Car Corp. plant. Hupp has been building 80 cars a day, basing production strictly upon sales demand, and it is the intention of Hupp executives to close down for short periods from time to time as the market fluctuates. However, President Hastings said demand is brisk and there's no indication to-day that the plant will have to slow up for some time to come.

Uptate concerns appear to be in good shape as far as production is concerned, because of the stimulation in sales as a result of the price cuts. This is true particularly of the Wilson Foundry & Machine Co. at Pontiac. Orders bringing production very close to the maximum of last year are reported by D. R. Wilson, general manager, who declared a part of its new plant has been put into use to meet the production demand.

"We passed the 1000 mark on its payroll last week," said Wilson, "and we are so busy trying to keep up to the demands of the Overland plant that we expect to be compelled to work a Sunday shift."

Sold Ahead Through August

"Rush of business at the Willys-Overland plant is keeping up, and reserve orders have grown to such an extent the plant is assured of its schedule through August. We have orders to turn out 550 jobs a day and that number is going through the shop. The Overland plant, however, will use that number, so we have little chance of getting ahead of it. This will necessitate our working on Sunday. We have been summoning former employees wherever it was possible to locate them, and the total number on the payroll has been substantially increased within the last two weeks."

OLDSMOBILE PRICES UNDERGO REVISION

Reductions Range from \$45 to \$575—Two Models Are Increased Slightly

NEW YORK, June 30—Price reductions on several models of the Oldsmobile, ranging from \$45 to \$575, and increases on two models will be effective July 2.

There will be reductions all along the line on the Model 43A, the 4-cylinder car, and on the Model 46, big 8-cylinder. On the light 8, Model 47, the coupe is reduced, while the sedan is increased \$30 because it could not be built at a profit at the old price. The light 8 touring car, a four-passenger job, is increased \$30 because of the change from fabric to cord tires.

Prices of the 6-cylinder model will be unchanged.

The price changes follow:

4-Cylinder		
	Old Price	New Price
Roadster	\$1445	\$1325
Touring	\$1445	\$1345
Coupe	\$2145	\$1895
Sedan	\$2145	\$2100
Light 8-Cylinder		
Touring	\$1695	\$1725
Coupe	\$2395	\$2225
Sedan	\$2395	\$2425
Big 8-Cylinder		
Touring	\$2100	\$1825
Touring 7-passenger	\$2100	\$1875
Sedan	\$3300	\$2775

Premier Reduces Prices

INDIANAPOLIS, June 30—The Premier Motor Car Corp., beginning July 1, will cut the prices of its cars from \$710 to \$910. The reductions are: Four-pass. touring from \$4,600 to \$3,690; 4-pass. sedan from \$6,000 to \$5,090; 7-pass. touring from \$4,600 to \$3,890; 7-pass. sedan from \$6,100 to \$5,190, and coupé from \$5,600 to \$4,690. There will be practically no changes in design and construction of the 1921 model.

Liberty Reduces Prices

DETROIT, July 1—The Liberty Motor Car Co. announces price cuts on all models effective today. The touring car and roadster are reduced from \$1,795 to \$1,595; the sport model from \$1,985 to \$1,675; the coupé from \$2,825 to \$2,400; and the sedan from \$2,850 to \$2,495.

Cole Cuts \$455 to \$700

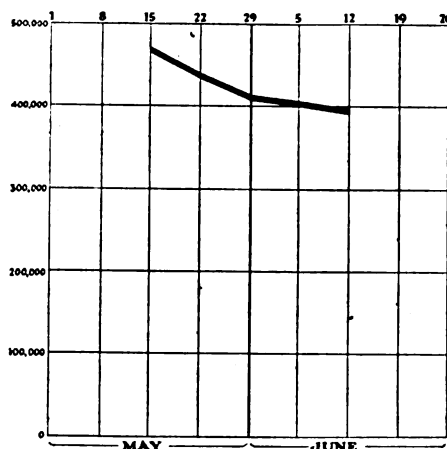
INDIANAPOLIS, July 1—Price reductions ranging from \$455 to \$700 on its different models were announced to-day by the Cole Motor Car Co. The new prices of the various models were not disclosed.

Barley Cuts \$100 to \$650

KALAMAZOO, MICH., July 2—Cuts ranging from \$100 to \$650, effective July 1, have been made by the Barley Motor Car Co. on its various models. The re-

ductions follow: Four-passenger touring from \$3,250 to \$2,985; roadster and four-passenger sport, \$3,375 to \$3,150; seven-passenger touring from \$3,400 to \$3,250; four-passenger coupe from \$4,250 to \$3,985; five-passenger sedan from \$4,250 to \$4,100; five-passenger limousine from \$4,500 to \$4,000; five-passenger landaulet from \$4,650 to \$4,000.

Idle Freight Car Record



The black line represents the record of idle freight cars throughout the United States. It is a business indicator of interest to all automotive men and especially to truck dealers. When the railroads are busy carrying merchandise it follows that manufacturers and merchants are busy fulfilling the needs of customers. Between May 15 and June 12 the average net car surplusage has shrunk from 469,770 to 396,44, a decrease of 72,006. During the week of June 5-12 the surplusage was reduced 8869.

JUNE FULFILLS PROMISE OF HIGH SALES MONTH

NEW YORK, June 30—The month has closed with both retail and wholesale sales of passenger cars in the New York territory running strong. Several medium priced cars have run far ahead of their April and May records.

Buick has closed its June books with the second largest month in the history of the New York branch. The record month was in 1918 but it exceeded the business of the past 30 days by only a few cars. Franklin's June was better than 1920. Oldsmobile exceeded its May record and almost equalled the heavy sales of April, business in the territory outside New York City being especially good. Maxwell's sales curve has climbed steadily through April, May and June. There are a few cars which have not sold well.

In general dealers are agreed that business is good.

G. M. C. Declares Dividend

NEW YORK, June 30—Directors of the General Motors Corp. at a meeting to-day declared the usual quarterly dividend on all classes of stock. Fred J. Fisher was elected a vice-president and director.

CLEVELAND SALES REACH NEW LEVEL

Business for June Ahead of May—Dealers Confident of Future

CLEVELAND, July 1—Cleveland retail automobile dealers are a unit in saying that business in June was better than it was in May. Many of the dealers visited said that the record for June this year is better than it was a year ago. Others made the statement that their deliveries of cars in six months this year are greater than a year ago in the same period, while their net profits are running higher this month than in the corresponding period a year ago. Most of the dealers who told of heavy deliveries proudly displayed their books to back their assertions.

The big point about the Cleveland retail dealer is that he is confident about his prospects for the next six months. Every man along Euclid Avenue is certain that he is going to enjoy better business the next six months than he did a year ago; in fact he expects to go way ahead of the figures for the last half in 1920.

Wholesale dealers have been cheered by an increased demand by Ohio farmers for cars. They are buying better than they did earlier in the year. The crops are soon to be harvested and that has an influence on the market. Dealers in small towns throughout the Buckeye State are coming here more frequently for cars this month than they did in May or in June a year ago. Long strings of new cars that are being driven away may be seen daily on the streets.

At Jordan Ohio the month of May was said to have been a good one, but June has been better. This company has enjoyed a great run since the price reduction.

Rienking & Fintze, who have the Chevrolet and Moon agency, are particularly optimistic. James Fintze says that up to June 20 his firm had delivered more cars and earned a greater net profit than they did in the entire months of June, 1919 and 1920.

BANK HEAD URGES PRICE STABILIZATION

(Continued from page 34)

lines will materially help the dealer in his plans for maintaining his organization and sales work that would permit broader plans for financing his requirements on the part of banks and ultimately be for the best interest of the public, the manufacturer and the retailer.

"Please be assured of the readiness of our bank to render every possible assistance in the solution of this problem for further stabilization of the automobile industry."

ASSOCIATION ACTIVITIES

Louisville Plans Used Car Sales

LOUISVILLE, July 2—It is believed that a workable plan for the used-car problem, the principal features of which have been advocated by W. O. Protsman, has been evolved by a special committee of the Louisville Automobile Dealers' Association. The plan will be reported to the members at the next monthly dinner meeting.

The used car plan which will be submitted to the association at the next meeting has the enthusiastic indorsement of every member of the special committee, which was composed of the directors of the association and the following members who were invited as an augmented committee: J. H. Limbird, W. T. Embry, J. W. Button and John S. Kelly, Jr. The plan is as follows:

Every dealer member of the association is to report to the secretary of the association every used car sale he makes. These reports will be made by mailing to the secretary a carbon copy of the customary bill of sale, showing sale price and description. Such reports are to be mailed in to the secretary's office at the close of business every Friday. A summary of these reports will be compiled showing the average price received for all makes of cars reported.

These summaries will be mailed out by the secretary at stated intervals. At first these intervals are to be every two weeks. Later, as the reports come in more generally from all the members, the summaries will be mailed out every week, reaching the dealer on Monday. The price shown will indicate to the dealer how much he can afford to allow on a given make and model of used car.

Kokomo Plans Fall Show

INDIANAPOLIS, July 1—Arrangements are being made for an automobile show to be held Sept. 5 to 10 at Kokomo, Ind. Wilber M. Fagley of the Howard County Automotive Trade Association recently appeared before the board of directors of the Kokomo Chamber of Commerce to ask for the use of their display room for this show and for its use one week each spring. It is expected that more than 100 pilots from all over the country will attend the aerial meet during the third week in September. These men have been invited to meet in Kokomo for the purpose of discussing and examining different types of commercial machines.

Back Big Chicago Pageant

CHICAGO, June 30—With the Chicago Automotive Trade Association, supported by the individual efforts of many prominent dealers and automobile manufacturers, planted firmly behind it, the automotive section of the Pageant of Progress, which will occupy 45,000 sq. ft. of floor space at this, the greatest of Chicago's industrial exhibitions,

promises to be a notable show.

The automotive division will be under the direct supervision of C. S. Rieman, president of the Elgin Motor Car Corp. This dull-season automobile show, July 30 to August 14, is planned as an annual affair and is drawing much interest throughout the industry. Passenger cars, trucks, tractors, airplanes, motorcycles, motor boats, tires, accessories and oils will feature this section. The show will be held on the Municipal Pier, which extends 3000 feet over Lake Michigan. There will be three and one-half miles of exhibits.

Tom J. Hay, president of the Chicago Automotive Trade Association, assisted by 100 men in the industry, is working with promise of success to bring 100,000 automobiles into Chicago during the ten days of the show.

Charge Highway Wastes

SACRAMENTO, CAL., July 2—Continuing its war upon the State Highway Commission's road building program and its work in the past, the California Automobile Association charges that the Commission has wasted millions of dollars in following persistently an obsolete pavement design long after its inadequacy had been proved.

Not one of the 35 States which are conducting extensive road building operations is building a pavement as thin as five inches, the association claims. Only six States are building as light as six inches, and all have a greater minimum width on trunk lines than has California, which has many pavements of but 16 and few more than 18 feet, which the association claims entirely inadequate to the traffic demands of the rapidly increasing number of automobiles and motor trucks.

California was practically the pioneer in building paved highways, it is admitted by the association, but the Highway Commission is charged with not profiting by experience and the example of other States.

Protest High Gas Price

SHREVEPORT, LA., June 30—Automobile dealers and users here are incensed because of the continued high prices of gasoline, when small Texas towns less than 40 miles away are favored with a rate 5 cents per gallon less. Voicing the sentiments of local automobile dealers and users, George D. Wray, an official of the Shreveport organization has sent the following telegram to former Lieutenant-Governor T. C. Barrett, member of the Constitutional Convention at Baton Rouge:

"Automobile dealers of Shreveport seriously protest against continued high prices of gasoline in Louisiana. Texas points having no refineries are quoting 18 cents or lower at filling stations. Price at Shreveport is 23 cents. Perhaps this is not the business of the Con-

stitutional Convention, but it is a matter which should engage the attention of every citizen of Louisiana who has the best interests of his State at heart. Forty thousand users of gasoline in Louisiana would like to see some action taken before adjournment."

Association Honors Lathrop

INDIANAPOLIS, July 2—H. C. Lathrop of the Lathrop-McFarland Co., Cole distributors here for many years, and treasurer of the Cole Motor Car Co., was guest in a farewell dinner given by the officers and board of directors of the Indianapolis Automobile Trade Association, in which Lathrop has been an active member, serving on the board of directors for several years. Lathrop is removing to San Francisco, where with J. C. McFarland, his Indianapolis partner, they will handle Cole motor cars. The Indianapolis association granted Lathrop indefinite leave of absence, not accepting a resignation. No announcement has been made of the Indianapolis store and it is generally understood that it will continue to operate for some time under the Lathrop-McFarland name.

Barrett Heads Finance Men

INDIANAPOLIS, July 1—F. E. Barrett was named chairman of the Indiana Finance Association, in a conference of automobile sales finance corporation representatives here Thursday. Other officers elected were Cuppy Stratton, Linton, Ind., vice-chairman; George A. Kuhn, Indianapolis, secretary; John W. Twitty, Indianapolis, treasurer. J. B. Perlee, Chicago, secretary of the National Finance Association, described the national organization and its functions. Uniformity in buying and selling of automobile paper in Indiana will be one of the first important efforts of the Indiana association, which includes representatives of 75 finance corporations.

Toledo Dealers Move Up

TOLEDO, July 1—To-day is moving day for three Toledo automobile dealers. The Landman-Griffith Co., dealers for Lincoln, Chalmers and Maxwell cars, will move into their new building at Adams and Warren streets.

H. W. Lancashire, the Dodge Bros. dealer, has leased the building vacated by the Landman-Griffith Co., at 14th and Madison Avenue.

The Jefferson Sales Co., Haynes and Mitchell dealers, will take over the unexpired term of the Lancashire lease on Madison Avenue.

By the new arrangements all parties will have larger quarters.

Howard Officers Named

INDIANAPOLIS, July 1—R. P. Seaward, of Seaward & Sons, has been named president of the Howard County Automotive Trade Association. Other officers are F. K. Eastman of the Franklin-Eastman Co., vice-president; Emil F. Beaver, of the Beaver Battery Service, treasurer, and H. R. Perry, of the Kokomo-Nash Co., re-elected secretary.

CHANGES IN THE TRADE

Sorg Motor Car & Truck Co., Detroit, has leased the entire building at Woodward Avenue and Alexandrine as a salesroom for display of Locomobiles, Mercer and Templar cars.

J. D. Friday has liquidated his business at Dorlington, S. C., and has removed to Charleston where he is now connected with W. T. Smith Co.

Harry W. Walters, sales manager of the Herring Motor Co., Des Moines, has been elected a member of the board of the Motor Trades Bureau to fill out the unexpired term of H. W. Lovegrove, resigned.

James A. Carr, who has been in the automobile business at Charleston, W. Va., handling the Jordan line, has returned to Toledo to take over the Toledo territory for the Lexington. He will have all city sales and a wide territory in this part of the state. Within a few weeks Carr expects to equip an up-to-date sales and service station.

G. R. Bury, general sales manager of the Packard Motor Car Co. has resigned on

account of ill health and will go to Los Angeles to become associated with the Packard distributor in that territory. His successor has not been named.

Barley Motor Car Co., has taken over the interests of the Roamer Motor Car Co. in San Francisco, with the purpose of establishing a factory branch. George E. Clarke is in charge as western district sales manager for the Barley company.

McDonald, Mayfield & Long have been named representatives at Suisun, Cal., for the Jordan and Mercer, by C. D. Rand & Co., San Francisco distributor.

F. A. Brinkman Co. has opened San Francisco headquarters for Stevens-Duryea on Van Ness Avenue. P. W. Hine, sales manager for Stevens-Duryea, Inc., attended the formal opening.

Pioneer Motor Co., San Francisco has disposed of its truck interests and hereafter will devote its attention to Peerless passenger cars in the northern California territory. George Peak, former president of the Pioneer, has disposed of his interests

in that company, according to this announcement, and has taken over the Republic truck account to handle separately. New officials of the Pioneer company are J. R. Buck, president, A. S. Terry, vice-president, and H. E. Manners, secretary and treasurer. The company will enlarge its dealers' organization at once. Peak has formed the George Peak Co. to distribute Republic trucks throughout northern California. Peak takes with him the sales organization he had built up at the Pioneer company headquarters.

Oakland Officials Change

DETROIT, July 1—W. B. Kelly, for 13 years works manager of the Oakland Motor Car Co., has resigned. He states that he has no definite plans for the future but it is presumed he will join the Durant forces. Thomas Mair, former comptroller for the Chevrolet company, has been transferred to the Oakland Motor Car Co., where he will succeed E. H. Tinsman, who has been transferred to the general comptroller's office of the General Motors Corp. at Detroit.

Ottawa Pioneer Dies

OTTAWA, ONT., July 1—W. W. Wylie, for 20 years manager of the Ottawa Car Co., is dead here. He retired in 1912 after which the company was incorporated and continues the extensive car manufacturing business.

Mr. Wylie made the first motor car to run through the city and astonished the citizens in 1894 by giving them a demonstration of his new method of locomotion.

J. A. Cleary Joins Collins

DETROIT, July 1—Another addition to the Durant executive staff from General Motors is John A. Cleary, advertising manager of the Cadillac, who resigns to accept the same position with R. H. Collins. Cleary has been with the Cadillac organization several years, having been sales promotion manager for the Cadillac distributor in Philadelphia prior to his factory connection. He has been closely associated with Collins and it had been understood from close friends that he would be one of the Cadillac employees to join their old chief in his new venture.

Holton Tractor Changes

INDIANAPOLIS, June 30—Announcement was made yesterday that the contract for the transfer of the Holton Tractor Co. of this city to the Kokomo company which will take over the tractor company's business, will be effected as soon as Elwood Haynes, of the Haynes Automobile Co., returns from New York. Negotiations for the transfer are being carried forward with the receiver here. The transaction will involve approximately \$350,000. The Holton Tractor Co. will probably be moved to Kokomo and it is understood that the strong features of a tractor manufactured at Elwood will be combined with the Holton invention. Others interested in the new company beside Haynes, are A. G. Seiberling, George J. Marott of Indianapolis, and Simeon McQuiston of Greentown.

Don Lee's New Building in San Francisco



Five acres of floor space for the sale and service of motor cars are provided in Don Lee's new building, the Don Lee-Cadillac Building, at Van Ness Avenue and O'Farrell Street, San Francisco. The structure is 120 x 200, of reinforced concrete and steel construction. The building is thoroughly departmentized and introduces, on the coast, many novel conveniences for handling the sale and service of cars

COMING EVENTS

SHOWS

Indianapolis	Sept. 5-10	Automobile and Accessory Show in conjunction with Indiana State Fair, conducted by Indianapolis Automotive Trade Ass'n, John B. Orman, Mgr.
Cincinnati	Oct. 1-8	Fall Automobile Show, Cincinnati Automotive Dealers' Ass'n, Music Hall.
Chicago	Nov. 14-19	Fall Show of Automotive Equipment Association.
New York	Nov. 27-Dec. 3	Automobile Salon, Hotel Commodore.
Chicago	January	Automobile Salon, Drake Hotel.
New York	Jan. 7-13	National Automobile Show, under auspices of National Automobile Chamber of Commerce, Madison Square Garden.
Chicago	Jan. 28-Feb. 3	National Automobile Show, under auspices of National Automobile Chamber of Commerce, Coliseum.

RACES

Detroit	July 9-24	Michigan Pikes Association Tour, Michigan and Ontario.
Le Mans, France	July 25	Grand Prix.
Uniontown, Pa.	Labor Day	Autumn Classic.
Los Angeles	Nov. 24	Speedway Events.

CONVENTIONS

Greenville, S. C.	July 20	Semi-Annual Meeting, South Carolina Automotive Trade Association.
Coden, Ala.	July 25-26	Midsummer Meeting of Alabama Automobile Dealers' Ass'n.
Chicago	Oct. 12-14	National Implement & Vehicle Association Convention, Congress Hotel.
New York City	Nov. 22-24	Semi-Annual Convention of Factory Service Managers, N. A. C. C., H. R. Cobligh, Secretary.

The New Car and Truck Description Index

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MICHIGAN KEEPS LABOR BUSY ON ROAD PROGRAM

DETROIT, July 1—New records for road construction will be set by the State Highway Department this year, according to L. N. Nielson, civil engineer for the department, who said 1000 miles of highway probably would be completed at a total construction cost of upwards of \$30,000,000. The State has more than \$13,000,000 to spend this season, including the \$10,000,000 limit set by the law and more than \$3,000,000 of last year's bonds which recently were sold.

The unemployment situation is having much to do with the rapid progress in road building throughout Michigan.

Last year 345 miles were completed and 661 miles for which contracts had been awarded were left over because of the difficulty in obtaining labor. Already this year 175 miles of highway have been completed and the season is hardly under way. In May alone 85 miles were finished.

Grieb & Thomas Hold Salon

PHILADELPHIA, July 1—Grieb & Thomas, distributors of Kissel cars, are holding open house, which they have termed an "Automobile Salon de Luxe," showing for the first time Kissel custom-built standard models. The company is reorganizing the personnel of its selling department.

OLYMPIC SHOW DATES FIXED BY COMMITTEES

LONDON, June 10 (By Mail)—The big British automobile show will be held simultaneously at Olympia and White City from Nov. 3 to 12. The truck show will be held Oct. 13 to 22. Arrangements have been made whereby accessory exhibitors who have space in the gallery at Olympia for the truck show may retain the same space for the passenger car exhibit. No change in prices will be permitted while the shows are in progress. Tractors will be admitted to the truck show if they are provided with means for traveling the roads and are licensed for that purpose.

Specifications of Current Passenger Car Models

NAME AND MODEL	Engine Make	Cylinders: Bore and Stroke	WB	Tires	2-Pass.	5-Pass.	7-Pass.	Coupe	Sedan	NAME AND MODEL	Engine Make	Cylinders: Bore and Stroke	WB	Tires	2-Pass.	5-Pass.	7-Pass.	Coupe	Sedan
Ace.....G	Guy.	6-3 1/2 x 5	123	32 x 4	\$2975	\$2975	\$3680	\$3680	Maibohm.....B	Falls	6-3 1/2 x 4 1/2	116	32 x 4	\$1575	\$1575	\$1750	\$2395	\$2395
Ace.....H	H-S.	6-3 3/4 x 5	123	32 x 4	2975	2975	.....	3680	3680	Marmon.....34	Own.	6-3 3/4 x 5 1/2	136	32 x 4 1/2	4185	4185	4875	5275
Ace.....L	H-S.	6-3 1/2 x 5	116	32 x 4	2260	2260	.....	.....	.....	Maxwell.....25	Own.	4-3 3/4 x 6	109	30 x 3 1/2	845	845	1445	1515
Allen.....Series 43	Own.	4-3 1/2 x 5	110	32 x 4	1385	1385	.....	2195	2195	McFarlan.....1921	Own.	6-4 1/2 x 6	140	33 x 5	6300	6300	7500	7500
Ambassador.....R	Cont.	6-3 1/2 x 5 1/2	136	33 x 5	4500	4500	.....	6500	6500	Merced.....Series 5	Own.	4-3 1/2 x 6 1/2	132	32 x 4 1/2	4500	4500	5700	6200
American.....C	H-S.	6-3 1/2 x 5	127	32 x 4	2195	2275	2350	3150	3150	Metz.....M6	Own.	6-3 1/2 x 5 1/2	119	32 x 4	2245	2245	.....	.....
Anderson.....Series 40	Cont.	6-3 1/2 x 4 1/2	120	33 x 4	2195	1795	1845	2795	2795	Meteor.....R & RR	Dues.	4-4 1/2 x 6	129	32 x 4 1/2	5500	5500	.....	.....
Apperson.....8-21-S	Own.	8-3 1/2 x 5	130	34 x 4 1/2	4250	4250	4500	4500	4500	Mitchell.....F-40	Own.	6-3 1/2 x 5	120	32 x 4	1995	1995	2795	2895	
Apperson.....Anniversary	Own.	8-3 1/2 x 5	130	34 x 4 1/2	4250	4250	4500	4500	4500	Mitchell.....F-42	Own.	6-3 1/2 x 5	120	32 x 4	1490	1490	2590	2690	
Auburn.....6-39	Cont.	6-3 1/2 x 4 1/2	120	33 x 4	1695	1695	2795	2795	2795	Moller.....A	Own.	4-2 1/2 x 4	100	27 x 3 1/2	2000	2000	.....	.....
Beggs.....20T	Cont.	6-3 1/2 x 4 1/2	120	33 x 4	1775	1775	2675	2775	2775	Monroe.....S-9 & 10	Own.	4-3 1/2 x 4 1/2	115	32 x 3 1/2	1295	1295	2075	2175	
Bell.....4-32	H-S.	4-3 1/2 x 5	114	31 x 4	.....	1495	.....	.....	.....	Monroe.....S-11 & 12	Own.	4-3 1/2 x 4 1/2	115	33 x 4	2285	2185	2685	3185
Bell.....6-50	H-S.	6-3 1/2 x 5	124	32 x 4	.....	1095	.....	.....	.....	Moon.....6-48	Cont.	6-3 1/2 x 4 1/2	122	32 x 4	4250	4250	4250	.....
Biddle.....81	Buda	4-3 1/2 x 5 1/2	121	32 x 4	3475	3475	3975	3975	3975	Murray-Mac Six.....	Own.	6-3 1/2 x 5 1/2	128	34 x 4 1/2	4250	4250	4250	.....
Birch Super-Four.....	H-S.	4-3 1/2 x 5	117	33 x 4	1345	1345	2295	2295	2295	Nash.....681-7	Own.	6-3 1/2 x 5	121	33 x 4	1525	1545	2395	2695	
Birch Light Four.....	LeR.	4-3 1/2 x 5 1/2	108	30 x 3 1/2	1195	1195	.....	.....	.....	Nash.....682	Own.	6-3 1/2 x 5	127	34 x 4 1/2	1175	1195	1735	1935
Birch Light Six.....	H-S.	6-3 1/2 x 5	117	33 x 4	1595	1595	.....	.....	.....	Nash Four.....41-4	Own.	4-3 1/2 x 5	112	32 x 3 1/2	2990	2990	3990	3990
Bour-Davis.....21S	Cont.	6-3 1/2 x 5 1/2	126	33 x 4 1/2	2385	2385	2385	.....	.....	Nelson.....D	Own.	4-3 1/2 x 4 1/2	104	32 x 4	1900	1900	.....	.....
Brewster.....91	Own.	4-4 x 5 1/2	125	32 x 4 1/2	7000	7000	10500	10500	10500	Noma.....1C	Cont.	6-3 1/2 x 4 1/2	128	32 x 4 1/2	3000	3200	4450	4450	
Briscoe.....4-34	Own.	4-3 3/4 x 5	109	31 x 4	1085	1085	1685	1685	1685	Northway.....	Own.	6-3 1/2 x 5 1/2	128	33 x 5	4200	4200	5600	5400	
Brook.....S-21 A	Own.	2-3 1/2 x 3 1/2	90	28 x 3	395	395	.....	.....	.....	Norwalk.....430-KS	Lye.	4-3 1/2 x 5	116	32 x 3 1/2	1135	1135	.....	.....
Buick.....1922-41-5-6-7	Own.	6-3 3/4 x 5 1/2	118	33 x 4 1/2	1495	1525	2135	2435	2435	Oakland.....34-C	Own.	6-2 1/2 x 4 1/2	115	32 x 4	1145	1145	1815	1815	
Buick.....1922-48-9-50	Own.	6-3 3/4 x 5 1/2	124	34 x 4 1/2	1735	2635	2325	2635	2635	Ogren.....6-60	Own.	6-3 1/2 x 5 1/2	134	33 x 5	3850	3750	5000	5400	
Bush.....E.C.4	Lyn.	4-3 1/2 x 5	116	33 x 4	1245	1245	2050	2150	2150	Oldsmobile.....43-A	Own.	4-3 1/2 x 5 1/2	115	32 x 4	1445	1445	2145	2145	
Bush.....E.C.6	Rut.	6-3 1/2 x 5	116	33 x 4	1295	1575	2050	2150	2150	Oldsmobile.....37A	Own.	6-2 1/2 x 4 1/2	112	32 x 4	1450	1450	2145	2145	
Cadillac.....59	Own.	8-3 1/2 x 5 1/2	132	34 x 4 1/2	3790	3790	4050	5190	5190	Oldsmobile.....46	Own.	8-2 1/2 x 4 1/2	122	33 x 4 1/2	12100	2100	3300	3300	
Carroll.....C	Roeh.	6-3 1/2 x 5	128	33 x 5	3985	3985	.....	.....	.....	Oldsmobile.....47	Own.	8-2 1/2 x 4 1/2	115	32 x 4	11695	11695	2395	2395
Carroll.....D	Roeh.	6-3 1/2 x 5	128	33 x 5	3185	3185	.....	.....	.....	Overland.....4	Own.	4-3 3/4 x 4	100	30 x 3 1/2	695	695	1000	1275
Case.....V	Cont.	6-3 1/2 x 4 1/2	126	34 x 4 1/2	1260	1260	3400	3750	3750	Packard.....Single-Six	Own.	6-3 3/4 x 4 1/2	116	33 x 4 1/2	2975	2975	4150	4250	
Chalmers.....6-39	Own.	6-3 1/2 x 4 1/2	117	32 x 4	1495	1545	2295	2445	2445	Packard.....Twin Six	Own.	12-3 x 5	136	35 x 5	6000	6000	8200	8450	
Chalmers.....6-39	Own.	6-3 1/2 x 4 1/2	112	32 x 4	1250	1250	.....	.....	.....	Paige.....6-42	Own.	6-3 1/2 x 5	119	32 x 4	1635	1635	1925	2450
Champion.....Tourist	Lye.	4-3 1/2 x 5	113	32 x 3 1/2	1595	1595	2785	2885	2885	Paige.....6-66	Cont.	6-3 1/2 x 5	131	33 x 4 1/2	2975	3295	3755	3830	
Champion.....Special	H-S.	6-3 1/2 x 5	123	33 x 4	1785	1785	2785	2885	2885	Pan.....A	Own.	4-3 1/2 x 5	108	33 x 4	1500	1500	.....	.....
Chandler.....Six	Own.	4-3 1/2 x 4	102	30 x 3 1/2	635	645	1155	1195	1195	Pan American E & F.....6-55	H-S.	6-3 1/2 x 5	121	33 x 4	2000	2000	.....	.....
Chevrolet.....490	Own.	4-3 1/2 x 4	110	33 x 4	1185	1185	1885	1885	1885	Parenti.....8-28	Own.	8-28 x 4 1/2	125	32 x 4	2000	2000	2895	3000	
Chevrolet.....FB	Own.	6-3 x 4 1/2	112	32 x 4	1295	1295	2195	2295	2295	Peterson.....650	Cont.	6-3 1/2 x 4 1/2	120	33 x 4	1895	1895	2895	2895	
Cleveland.....40	H-S.	4-3 1/2 x 5	127	32 x 4	1450	1450	2495	2595	2595	Peterson.....56-S-7	Own.	8-3 1/2 x 5	125	34 x 4 1/2	2990	2990	3680	3950	
Climber Four.....	H-S.	4-3 1/2 x 5	125 1/2	32 x 4 1/2	2250	2250	.....	.....	.....	Peters.....	Own.	2-3 1/2 x 3 1/2	90	28 x 3	385	385	.....	.....
Climber Six.....	S	6-3 1/2 x 4 1/2	127	33 x 5	3250	3250	4250	4450	4450	Piedmont.....4-30	Lye.	4-3 1/2 x 5	116	32 x 3 1/2	1270	1270	.....	.....
Cole.....870	Cont.	6-3 1/2 x 4 1/2	115	32 x 4	1795	1795	2495	2595	2595	Piedmont.....6-40	Own.	6-3 1/2 x 4 1/2	122	32 x 4	1495	1495	.....	.....
Columbia.....D-C & CS	Cont.	6-3 1/2 x 4 1/2	125	33 x 4 1/2	2350	2450	.....	.....	.....	Pierce-Arrow.....	Own.	6-4 x 5 1/2	138	35 x 5	8000	7500	8500	9000
Comet.....C-53	Cont.	6-3 1/2 x 4 1/2	117	32 x 4	1505	1505	2465	2465	2465	Pilot.....6-45	Teetor	6-3 1/2 x 5	120	32 x 4	1915	1895	2335	3400	
Commonwealth.....44	H-S.	4-3 1/2 x 5	122 1/2	32 x 4	2000	2000	.....	.....	.....	Pilot.....6-50	H-S.	6-3 1/2 x 5	126	32 x 4 1/2	2285	2285	3350	3400
Crawford.....21-6-40	Lye.	4-3 1/2 x 5	117	32 x 3 1/2	1295	1295	.....	.....	.....	Porter.....40	Own.	4-4 1/2 x 6 1/2	142	35 x 5	6750	Chassis Price	.....	.....
Crow-Elkhart.....L-63-65	H-S.	6-3 1/2 x 5	117	33 x 4	1545	1545	2395	2395	2395	Premier.....6-D	Own.	6-3 1/2 x 5 1/2	126 1/2	33 x 5	3790	3690	4690	5190	
Crow-Elkhart.....S-63-65	H-S.	6-3 1/2 x 5	117	33 x 4	1545	1545	2395	2395	2395	Premocor.....6-40 A	Falls.	6-3 1/2 x 4 1/2	117	32 x 3 1/2	1295	1295	.....	.....
Cunningham.....V-4	Own.	8-3 1/2 x 5	142	35 x 5	.....	.....	.....	.....	.....	Raleigh.....A-6-60	H-S.	6-3 1/2 x 5	122	32 x 4 1/2	2250	2250	3100	3200
Daniels.....D-19	Own.	8-3 1/2 x 5 1/2	132	34 x 4 1/2	5350	5350	6250	6050	6050	Ranger.....A-20	Own.	4-3 3/4 x 5	116	32 x 4	2150	2150	2850	2950	
Davis.....61-67	Cont.	6-3 1/2 x 4 1/2	120	33 x 4	1995	1895	2150	2795	2795	R & V Knight.....R	Own.	4-3 1/2 x 5	116	32 x 4	2150	2150	2850	2950	
Dispatch.....	Wisc.	4-3 1/2 x 5	120	34 x 4	1299	1350	1525	1575	1575	R & V Knight.....J	Own.	6-3 1/2 x 4 1/2	127	32 x 4 1/2	3350	3350	4000	4200	
Dixie Flyer.....H-S-70	H-S.	4-3 1/2 x 5	112	32 x 4	1445	1445	2295	2345	2345	Reo.....T-6	Own.	6-3 1/2 x 5	120	33 x 4	1850	1850	2700	2750	
Dodge Brothers.....	Own.	4-3 1/2 x 4 1/2	114	32 x 3 1/2	935	985	1585	1785	1785	Revere.....C	Dues.	4-3 3/4 x 6	131	32 x 4 1/2	4850	4650	14650	6500	
Dorris.....6-80	Own.	6-4 x 5	132	33 x 5	4785	4785	5800	6090	6090	Roamer.....6-54-E	Cont.	6-3 1/2 x 5 1/2	138	32 x 4 1/2	2000	2000	2100	2450	
Dort.....17-12	D-Ly	4-3 1/2 x 5	108	31 x 4	985	985	1535	1685	1685	Romer.....	Cont.	6-3 1/2 x 4 1/2	120	32 x 4	2000	2000	2100	2450	
Dupont.....A	Own.	4-3 1/2 x 5 1/2	124	32 x 4 1/2	3400	3400	4900	4900	4900	Rock Falls.....14000	Cont.	6-3 1/2 x 5	132	35 x 5	.....	.....	11750	.....
Elcar.....K-4	Lye.	4-2 1/2 x 5	117	33 x 4	1300	1300	.....	.....	.....	Rolls-Royce.....	Own.	6-4 1/2 x 4 1/2	143 1/2	33 x 5	U.S. Chassis Price	.....	.....	.....
Elcar.....7-R	Cont.	6-3 1/2 x 4 1/2	117	33 x 4	1700	1700	2500	2600	2600	Saxon.....125	Own.	4-3 3/4 x 5	112	32 x 4	1495	1495	2295	2295	
Elgin.....K-1	Falls.	6-3 1/2 x 4 1/2	118	33 x 4	1595	1495	2395	2395	2395	Sayers Six.....DP	Cont.	6-3 1/2 x 4 1/2	118	33 x 4	2495	2195	3295	3295	
Essex.....	Own.	4-3 3/4 x 5	108 1/2	32 x 4	1445	1445	1950	2300	2300	Scripps-Booth.....B-39-42	North.	6-2 1/2 x 4 1/2	115	32 x 4	1275	1295	1950	2100	
Fergus.....S-5-21	Own.	6-3 1/2 x 5	126	32 x 4 1/2	.....	Chassis Price	8500	.....	.....	Seneca.....L & O	LeR.	4-3 1/2 x 4 1/2	108	30 x 3 1/2	1045	1045	.....	.....
Ferris.....	Cont.	6-3 1/2 x 5 1/2	130	33 x 4 1/2	3350	3350	4100	4100	4100	Servin.....Six	Cont.	6-3 1/2 x 5 1/2	122	33 x 4	1485	1485	2100	2250	
Ford.....	T	4-3 1/2 x 4	110	30 x 3 1/2	770	770	605	760	760	Servin.....Six	Cont.	6-3 1/2 x 5 1/2	122	33 x 5	2550	2550	3250	3350	
Franklin.....9-B	Own.	6-3 1/2 x 4	115	32 x 4	2550	2550	3650	3650	3650	Sheridan.....4	North.	4-3 1/2 x 5 1/2	116	33 x 4	1485	1485	2060	2360	
Friend.....Four	Own.	4-3 1/2 x 4 1/2	112	32 x 3 1/2	1285	1285	1985	2085	2085	Sheridan.....8	North								

Specifications of Current Motor Truck Models

NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive
				Front	Rear						Front	Rear						Front	Rear	
Acason	1 1/2	\$1680	3 1/2 x 5	34x5 1/2	34x5 1/2	W	Cook, 41	2	3000	4 x 5 1/2	36x6 1/2	38x7 1/2	I	Gary, F	1 1/2	2100	3 1/2 x 5	36x3 1/2	36x4	W
Acason, R	1 1/2	2280	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Corbett, E	1	\$2400	3 1/2 x 5	34x3 1/2	34x4	W	Gary, J	1 1/2	\$2550	4 x 5 1/2	36x3 1/2	36x5	W
Acason, RB	1 1/2	2485	3 1/2 x 5 1/2	36x3 1/2	36x6	W	Corbett, D	1 1/2	2800	3 1/2 x 5	36x3 1/2	36x5	W	Gary, J	2 1/2	3150	4 x 5 1/2	36x4	36x7	W
Acason, H	2 1/2	3295	4 1/2 x 5 1/2	36x4	36x4 1/2	W	Corbett, C	2	3500	4 1/2 x 5 1/2	36x3 1/2	36x7	W	Gary, K	3 1/2	4050	4 1/2 x 6	36x5	40x5d	W
Acason, L	3 1/2	4295	4 1/2 x 5 1/2	36x5	36x5d	W	Corbett, B	2 1/2	3650	4 1/2 x 5 1/2	36x4	36x7	W	Gary, M	5	5150	5 x 6 1/2	36x6	40x6d	W
Acason, M	5	5250	5 x 6 1/2	36x6	40x12	W	Corbett, A	3 1/2	4500	4 1/2 x 5 1/2	36x5	36x10	W	Gerais M	1 1/2	3100	4 x 5 1/2	36x3 1/2	36x7	W
Ace, C	1 1/2	2295	3 1/2 x 5 1/2	34x3 1/2	34x5	W	Corbett, AA	5	5500	4 1/2 x 6	36x6	40x6d	W	Gerais K	2 1/2	3500	4 1/2 x 5 1/2	36x4	36x8	W
Ace, A	2 1/2	2795	4 1/2 x 5 1/2	36x4	36x7	W	Cyclone	1 1/2	2800	3 1/2 x 5	34x5 1/2	36x6 1/2	I	Gerais	3 1/2	4500	4 1/2 x 6	36x5	40x12	W
Acme, G	1 1/2	2280	3 1/2 x 5	35x5 1/2	35x5 1/2	W	Dart, S	1 1/2	2280	3 1/2 x 5 1/2	34x3 1/2	34x6	W	Giant, 15-A	1 1/2	2250	3 1/2 x 5	34x3 1/2	34x5	W
Acme, B	1 1/2	2280	3 1/2 x 5	34x3 1/2	34x5	W	Dart, M	2 1/2	2280	3 1/2 x 5 1/2	34x4	36x7	W	Giant, 16	2	3150	4 1/2 x 5 1/2	36x4	36x7	W
Acme, F	1 1/2	2280	3 1/2 x 5	34x3 1/2	34x5	W	Dart, W	3 1/2	2280	3 1/2 x 5 1/2	34x5	36x10	W	Giant, 17	3 1/2	4150	4 1/2 x 5 1/2	36x5	36x5d	W
Acme, A	2	2280	4 1/2 x 5 1/2	36x4	36x7	W	Day-Elder, A	1	2225	3 1/2 x 5	34x3 1/2	34x4	W	Globe D-20	4	1495	3 1/2 x 5	33x4 1/2	33x4 1/2	W
Acme, C	3 1/2	2280	4 1/2 x 5 1/2	36x5	40x10	W	Day-Elder, B	1 1/2	2425	3 1/2 x 5	34x3 1/2	34x5	W	Golden West, G	3 1/2	4500	4 1/2 x 6	36x6	36x6	W
Acme, E	5	5250	5 x 6 1/2	36x6	40x12	W	Day-Elder, C	2 1/2	2900	4 1/2 x 5 1/2	36x4	36x7	W	Golden West, H	3 1/2	5000	4 1/2 x 6	36x6	36x6	W
Akr'n Multi-Trk-20	1	1995	4 x 5 1/2	34x5	34x5	W	Day-Elder, D	2 1/2	3125	4 1/2 x 5	36x4	36x7	W	Golden West, GH	3 1/2	5000	4 1/2 x 6	36x7	36x7	W
Al-Power, C	3 1/2	5800	4 1/2 x 6	36x7	36x10	W	Day-Elder, E	2 1/2	3850	4 1/2 x 5 1/2	36x5	36x5d	W	Golden West, T	4	5500	4 1/2 x 6	36x6	36x6	W
Al-American, B-1	1	1795	3 1/2 x 5	32x4	32x4	W	Day-Elder, F	2 1/2	4875	4 1/2 x 5 1/2	36x5	36x6d	W	Golden West, K	7	6000	5 1/2 x 6	36x6	36x6	W
Al-American, C-1	1 1/2	2195	3 1/2 x 5	34x4	34x5	W	Day-Elder, G	5	2180	3 1/2 x 5 1/2	36x5	36x6d	W	Golden West, HA	7	6000	4 1/2 x 6	36x6	36x10	W
American, 25	2 1/2	3350	4 x 6	36x4	36x4d	W	Dearborn, F	2	2590	3 1/2 x 5 1/2	36x5	36x7	W	Gore, A-1	2 1/2	2495	3 1/2 x 5	36x4	36x7	I
American, 40	4	4275	4 1/2 x 6	36x5	36x5d	W	Dearborn, 48	2	1975	3 1/2 x 5	35x5	36x6 1/2	I	Graham Bros. A	1 1/2	1495	3 1/2 x 5	35x5 1/2	35x5 1/2	I
Aper, G	1	1675	3 1/2 x 5	33x5 1/2	33x5 1/2	W	Defiance G	1 1/2	2550	3 1/2 x 5	35x5	36x6 1/2	I	Graham-Born, 10	1	2050	3 1/2 x 5	36x3 1/2	36x5	W
Aper, D	1 1/2	1915	3 1/2 x 5 1/2	34x3 1/2	34x4	W	Defiance, E2	2	2750	3 1/2 x 5	35x5	36x7 1/2	I	Graham-Born, 15	1 1/2	2725	3 1/2 x 5	36x3 1/2	36x5	W
Aper, E	2 1/2	2695	4 1/2 x 5 1/2	36x4	36x7	W	DeKalb, E2 1/2	2 1/2	2800	4 1/2 x 5 1/2	36x4	36x6	W	Graham-Born, 20	2	3175	4 1/2 x 5 1/2	36x4	36x7	W
Aper, F	3 1/2	3975	4 1/2 x 6	36x5	36x10	W	DeMartini 1 1/2	1 1/2	2800	3 1/2 x 5	36x3 1/2	36x7	W	Graham-Born, 25	2 1/2	3575	4 1/2 x 5 1/2	36x4	36x4d	W
Armleder, HW	2 1/2	2695	4 1/2 x 5 1/2	36x4	36x7	W	DeMartini 2	2	3200	4 x 5 1/2	36x4	36x10	W	Graham-Born, 30	3 1/2	4375	4 1/2 x 6	36x5	40x5d	W
Armleder, KW	1	1675	3 1/2 x 5	36x5	36x5d	W	DeMartini 3	3	4250	4 x 5 1/2	36x4	36x10	W	Graham-Born, 50	5	5275	4 1/2 x 6	36x6	40x6d	W
Armleder, 20	1	1675	3 1/2 x 5	34x3 1/2	34x5	W	DeMartini 4	4	4800	4 x 6	36x5	36x12	W	Hahn, J4	1 1/2	2495	3 1/2 x 5	34x5	34x5	W
Atco, B	1 1/2	2280	3 1/2 x 5	34x5	36x6	W	DeMartini 4	4	4800	4 x 6	36x5	36x12	W	Hahn, CD	1 1/2	2495	3 1/2 x 5	36x3 1/2	36x6	W
Atco, B1	1 1/2	2280	3 1/2 x 5	34x5	36x6	W	DeMartini 4	4	4800	4 x 6	36x5	36x12	W	Hahn, EE	2 1/2	2495	3 1/2 x 5	36x4	36x8	W
Atco, A	2 1/2	2280	4 1/2 x 5 1/2	36x4	36x8	W	DeMartini 4	4	4800	4 x 6	36x5	36x12	W	Hahn, F	3 1/2	2495	3 1/2 x 5	36x5	36x10	W
Atlas, M.D	1	1675	3 1/2 x 5	32x4 1/2	32x4 1/2	W	DeMartini 4	4	4800	4 x 6	36x5	36x12	W	Hahn, EF	5	2495	4 1/2 x 6	36x6	40x12	W
Atterbury, 20R	1 1/2	2775	3 1/2 x 5	34x3 1/2	34x5	W	DeMartini 4	4	4800	4 x 6	36x5	36x12	W	Hal Fur, E	1	2350	4 x 5	35x5 1/2	35x5 1/2	W
Atterbury, 7CX	2 1/2	3375	4 1/2 x 5 1/2	36x4	36x4d	W	DeMartini 4	4	4800	4 x 6	36x5	36x12	W	Hal Fur, F	2 1/2	3250	4 1/2 x 5 1/2	35x5	38x7	W
Atterbury, 7D	3 1/2	4175	4 1/2 x 5 1/2	36x5	40x5d	W	DeMartini 4	4	4800	4 x 6	36x5	36x12	W	Hal Fur, B	2 1/2	3250	4 1/2 x 5 1/2	35x5	38x7	W
Atterbury, 8E	5	5575	4 1/2 x 6	36x5	40x6d	W	DeMartini 4	4	4800	4 x 6	36x5	36x12	W	Hal Fur, B	2 1/2	3250	4 1/2 x 5 1/2	35x5	38x7	W
Autocar, 21UF	1 1/2-2	2300	4 1/2 x 5 1/2	34x4	34x5	W	DeMartini 4	4	4800	4 x 6	36x5	36x12	W	Hal Fur, B	2 1/2	3250	4 1/2 x 5 1/2	35x5	38x7	W
Autocar, 21UG	1 1/2-2	2400	4 1/2 x 5 1/2	34x4	34x5	W	DeMartini 4	4	4800	4 x 6	36x5	36x12	W	Hal Fur, B	2 1/2	3250	4 1/2 x 5 1/2	35x5	38x7	W
Autocar, 26T	1	4350	4 1/2 x 5 1/2	34x5	36x10	W	DeMartini 4	4	4800	4 x 6	36x5	36x12	W	Hal Fur, B	2 1/2	3250	4 1/2 x 5 1/2	35x5	38x7	W
Autocar, 26-B	1	4500	4 1/2 x 5 1/2	34x5	36x10	W	DeMartini 4	4	4800	4 x 6	36x5	36x12	W	Hal Fur, B	2 1/2	3250	4 1/2 x 5 1/2	35x5	38x7	W
Available, H1 1/2	1 1/2	2750	4 x 5 1/2	36x3 1/2	36x5	W	DeMartini 4	4	4800	4 x 6	36x5	36x12	W	Hal Fur, B	2 1/2	3250	4 1/2 x 5 1/2	35x5	38x7	W
Available, H2 1/2	2 1/2	3475	4 x 5 1/2	36x4	36x8	W	DeMartini 4	4	4800	4 x 6	36x5	36x12	W	Hal Fur, B	2 1/2	3250	4 1/2 x 5 1/2	35x5	38x7	W
Available, H3 1/2	3 1/2	4475	4 1/2 x 5 1/2	36x5	40x5d	W	DeMartini 4	4	4800	4 x 6	36x5	36x12	W	Hal Fur, B	2 1/2	3250	4 1/2 x 5 1/2	35x5	38x7	W
Available, H5	5	5375	4 1/2 x 6	36x6	40x12	W	DeMartini 4	4	4800	4 x 6	36x5	36x12	W	Hal Fur, B	2 1/2	3250	4 1/2 x 5 1/2	35x5	38x7	W
Available, H7	7	6000	5 x 6	36x6	40x14	W	DeMartini 4	4	4800	4 x 6	36x5	36x12	W	Hal Fur, B	2 1/2	3250	4 1/2 x 5 1/2	35x5	38x7	W
Avery	1	1800	3 x 4	34x5 1/2	34x5 1/2	W	DeMartini 4	4	4800	4 x 6	36x5	36x12	W	Hal Fur, B	2 1/2	3250	4 1/2 x 5 1/2	35x5	38x7	W
Beck, At Jr.	1	1800	3 1/2 x 5	34x3 1/2	34x4	W	DeMartini 4	4	4800	4 x 6	36x5	36x12	W	Hal Fur, B	2 1/2	3250	4 1/2 x 5 1/2	35x5	38x7	W
Beck, C	2	2550	4 1/2 x 5 1/2	36x4	36x6	W	DeMartini 4	4	4800	4 x 6	36x5	36x12	W	Hal Fur, B	2 1/2	3250	4 1/2 x 5 1/2	35x5	38x7	W
Beck, O	2 1/2	2750	4 1/2 x 5 1/2	36x4	36x7	W	DeMartini 4	4	4800	4 x 6	36x5	36x12	W	Hal Fur, B	2 1/2	3250	4 1/2 x 5 1/2			

Specifications of Current Motor Truck Models—Continued

NAME AND MODEL	Tons Capacity	Chassis Price	Base and Stroke	TIRES Front Rear	Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Base and Stroke	TIRES Front Rear	Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Base and Stroke	TIRES Front Rear	Final Drive
Kelly-S, K-45	4	\$4550	4 1/2 x 6 1/2	36x5 36x5	C	Ogden, A1	1 1/2	\$2550	3 1/2 x 5	36x3 1/2 36x5	W	Service, 71	2 1/2	\$4285	4 1/2 x 5 1/2	36x5 36x5 1/2	W
Kelly-S, K-50	5	4900	4 1/2 x 6 1/2	36x5 36x5	C	Ogden, E	2 1/2	3250	4 1/2 x 5 1/2	36x4 36x7	W	Service, 76	3 1/2	4485	4 1/2 x 5 1/2	36x5 36x5 1/2	W
Kelly-S, K-60	6	5100	4 1/2 x 6 1/2	36x5 36x5	C	Old Hickory, W	1	2175	3 1/2 x 5	36x3 1/2 36x4	W	Service, 101	5	5275	4 1/2 x 5 1/2	36x5 36x5 1/2	W
Keystone, 40	2	2450	3 1/2 x 5 1/2	34x5 38x7 1/2	C	Old Reliable, A	1 1/2	2350	4 x 5	34x4 36x6	W	Signal, NF	1	2475	4 1/2 x 5 1/2	34x5 36x7 1/2	W
Kimball, AB	2	3675	4 x 6	36x4 36x7	W	Old Reliable, B	2 1/2	3500	4 1/2 x 6	34x4 36x4 1/2	W	Signal, H	1 1/2	2925	4 1/2 x 5 1/2	34x4 36x6	W
Kimball, AC	2 1/2	3975	4 1/2 x 6	36x4 36x8	W	Old Reliable, C	3 1/2	4250	4 1/2 x 6	36x5 36x5 1/2	W	Signal, J	2 1/2	3275	4 1/2 x 5 1/2	34x4 36x8	W
Kimball, AK	3	4500	4 1/2 x 6	36x4 36x10	W	Old Reliable, D	5	5250	4 1/2 x 6	36x6 40x6 1/2	W	Signal, M	3 1/2	4275	4 1/2 x 5 1/2	36x5 40x5 1/2	W
Kimball, AE	4	5000	4 1/2 x 6	36x5 40x12	W	Old Reliable, KLM	7	6000	4 1/2 x 6	36x6 40x7 1/2	W	Signal, R	5	5300	4 1/2 x 6	36x6 40x6 1/2	W
Kimball, AF	5	5975	5 x 6	36x6 40x7 1/2	W	Oldsmobile Econ.	1	1500	3 1/2 x 5 1/2	35x5 35x7	I	Southern, 10	1	2090	3 1/2 x 5	34x3 1/2 34x4	W
Kissel, Express	1	1985 1/2	3 1/2 x 5 1/2	34x5 34x5 1/2	W	Olympic, A	2 1/2	3500	4 1/2 x 5 1/2	36x4 36x7	W	Southern, 15	1 1/2	2590	3 1/2 x 5 1/2	36x6 34x4	W
Kissel, Utility	1 1/2	2775	3 1/2 x 5 1/2	36x3 1/2 36x5	W	Oneida, A-9	1 1/2	2350	3 1/2 x 5 1/2	36x3 1/2 36x5	W	Southern, 20	2	2990	3 1/2 x 5 1/2	36x6 40x8 1/2	W
Kissel, Freight	2 1/2	3475	4 1/2 x 5 1/2	36x4 36x7	W	Oneida, B-9	1 1/2	2915	4 x 5 1/2	36x4 36x7	W	Standard, 1-K	1-1 1/2	1950	3 1/2 x 5	34x3 1/2 34x5 1/2	W
Kissel, H. D.	4	4475	4 1/2 x 5 1/2	36x5 36x5 1/2	W	Oneida, C-9	2 1/2	3390	4 x 5 1/2	36x4 36x7	W	Standard, 76	2 1/2-3	3100	4 1/2 x 5 1/2	36x4 36x7 1/2	W
Kleber, A	1	2600	4 1/2 x 5 1/2	34x3 1/2 34x5	W	Oneida, D-9	3 1/2	4345	4 1/2 x 5 1/2	36x5 36x10	W	Standard, 66	3 1/2-4	4000	4 1/2 x 5 1/2	36x5 36x10	W
Kleber, A	1 1/2	3100	4 1/2 x 5 1/2	36x3 1/2 36x6	W	Oneida, E-9	5	5460	4 1/2 x 5 1/2	36x6 40x12	W	Standard, 5-K	5-6	5250	4 1/2 x 6	36x6 40x12	W
Kleber, BB	2	3600	4 1/2 x 5 1/2	36x4 36x7	W	Orleans, A	1 1/2	2750	3 1/2 x 5 1/2	36x3 1/2 36x5	W	Sterling, 1 1/2	1 1/2	3200	4 x 5 1/2	36x3 1/2 36x5	W
Kleber, B	2 1/2	4200	4 1/2 x 5 1/2	36x5 36x8	W	Orleans, B	2 1/2	3250	4 1/2 x 5 1/2	36x4 36x7	W	Sterling, 2	2	3500	4 x 5 1/2	36x4 36x6	W
Kleber, C	3	4900	4 1/2 x 5 1/2	36x5 36x5 1/2	W	Orleans, C	3 1/2	3750	4 1/2 x 5 1/2	36x4 36x8	W	Sterling, 2 1/2	2 1/2	3650	4 1/2 x 5 1/2	36x4 36x4 1/2	W
Kleber, D	5	5600	5 x 6 1/2	36x6 40x12	W	Oshkosh, A	5	4250	4 1/2 x 5 1/2	36x6 40x8	W	Sterling, 3 1/2	3 1/2	4650	4 1/2 x 5 1/2	36x5 40x5 1/2	W
Koehler, D	1 1/2	...	3 1/2 x 5 1/2	34x3 1/2 34x5	W	Oshkosh, AA	2	3750	3 1/2 x 5 1/2	36x6 40x8 1/2	W	Sterling, S-W	5	5500	5 x 6 1/2	36x6 40x6 1/2	W
Koehler, M	2 1/2	...	4 x 5 1/2	36x4 36x7	W	Oshkosh, BB	2 1/2	3850	3 1/2 x 5 1/2	36x6 40x8 1/2	W	Sterling, S-C	5	6000	5 x 6 1/2	36x6 40x6 1/2	C
Koehler, MCS	2 1/2	...	4 x 5 1/2	36x4 36x7	W	Oshkosh, CC	2 1/2	4150	4 x 5 1/2	36x7 38x7 1/2	W	Sterling, 7 1/2	7 1/2	6500	5 x 6 1/2	36x6 40x7 1/2	C
Koehler, F	2 1/2	...	4 1/2 x 5 1/2	36x5 36x10	W	Oshkosh, EE	2 1/2	4300	4 x 5 1/2	36x7 38x7 1/2	W	Stewart, 11	1 1/2	1350	3 1/2 x 4 1/2	32x4 32x4 1/2	I
Koehler, MT, Trac	3 1/2	...	4 x 5 1/2	36x4 36x7	W	Packard, AB	...	3700	4 1/2 x 5 1/2	36x4 36x7	W	Stewart, 15	1	1875	3 1/2 x 5	35x5 35x5 1/2	I
L.M.C., 2-28	2 1/2	2540	4 1/2 x 5 1/2	36x4 36x4 1/2	I	Packard, ED	...	4450	4 1/2 x 5 1/2	36x5 36x5 1/2	W	Stewart, 9	1 1/2	2200	3 1/2 x 5	34x3 1/2 34x5	I
Lange, B	2 1/2	3350	4 1/2 x 5 1/2	36x4 36x6	I	Packard, EF	...	5550	5 x 6 1/2	36x6 40x6 1/2	W	Stewart, 7	2	2900	3 1/2 x 5	34x4 34x7	I
Larrabee, U	1 1/2	2400	3 1/2 x 5	34x3 1/2 34x5	W	Packard, EX	...	4200	4 1/2 x 5 1/2	36x6 40x8 1/2	W	Stewart, 7-X	2 1/2	2950	4 1/2 x 5 1/2	34x4 34x7	I
Larrabee, K	2 1/2	3400	4 1/2 x 5 1/2	36x4 36x7	W	Paige, S2-19	1 1/2	2880	4 x 5 1/2	34x3 1/2 34x5	W	Stewart, 10	3 1/2	3850	4 1/2 x 5 1/2	36x5 36x5 1/2	I
Larrabee, L	2 1/2	4200	4 1/2 x 5 1/2	36x5 36x5 1/2	W	Paige, S4-28	2 1/2	3400	4 1/2 x 5 1/2	34x4 34x4 1/2	W	Stewart, 10-X	3 1/2	3850	4 1/2 x 6	36x5 36x5 1/2	I
Larrabee, W	5	5100	4 1/2 x 6	36x6 40x6 1/2	W	Paige, S1-18	3 1/2	4285	4 1/2 x 5 1/2	36x5 36x5 1/2	W	Stoughton, A	1	1995	3 1/2 x 5 1/2	34x4 34x5 1/2	W
Lion, L	1	2350	3 1/2 x 5 1/2	35x5 35x5 1/2	W	Parker, J20	2	3500	4 x 6	34x4 36x4 1/2	W	Stoughton, B	1 1/2	2350	3 1/2 x 5 1/2	36x3 1/2 36x5	W
Loedingham, C	1	2100	3 1/2 x 5 1/2	35x5 35x5 1/2	W	Parker, J20	3 1/2	4400	4 1/2 x 6	36x6 40x5 1/2	W	Stoughton, D	2	2800	4 x 5 1/2	36x4 36x7	W
Loedingham, W	1 1/2	2700	3 1/2 x 5 1/2	34x3 1/2 34x5	W	Parker, M20	5	5500	4 1/2 x 6	36x6 40x6 1/2	W	Stoughton, F	3	3600	4 1/2 x 5 1/2	36x5 36x5 1/2	W
Macar, L	2 1/2	3150	4 1/2 x 5 1/2	36x4 36x7	W	Patriot, Reverse	1 1/2	1795	3 1/2 x 5	35x5 35x5 1/2	W	Sullivan, E	2	3350	4 1/2 x 5 1/2	36x4 36x7	W
Macar, H-2	1 1/2	2925	4 1/2 x 5 1/2	36x4 36x6	W	Patriot, Lincoln	1 1/2	2450	4 x 5 1/2	34x3 1/2 34x5	W	Sullivan, H	3 1/2	4650	4 1/2 x 5 1/2	36x5 36x5 1/2	W
Macar, M-2	3 1/2	3750	4 1/2 x 5 1/2	36x5 36x5 1/2	W	Patriot, Wash'n	2 1/2	3450	4 1/2 x 5 1/2	36x4 36x7	W	Superior, D	1	1650	3 1/2 x 5	34x4 34x4 1/2	I
Macar, G	5	4500	4 1/2 x 6	36x5 36x5 1/2	W	Piedmont, 4-30	1 1/2	1685	3 1/2 x 5	34x4 34x4 1/2	W	Superior, E	2	2600	4 1/2 x 5 1/2	36x4 36x6	I
MacDonald, A	7 1/2	5750	4 1/2 x 6	40x7 40x14	I	Pierce-Arrow	2	3750	4 x 5 1/2	36x4 36x4 1/2	W	Super Truck, 50	2 1/2	3300	4 x 6	36x4 36x8	W
Mac, AB D.R.	1 1/2	3450	4 x 5	36x4 36x3 1/2	I	Pierce-Arrow	3 1/2	4950	4 1/2 x 6	36x5 36x5 1/2	W	Super Truck, 70	3 1/2	4300	4 1/2 x 6	36x5 40x5 1/2	W
Mac, AB Chain	2 1/2	3400	4 x 5	36x4 36x4	C	Pioneer, 30	1	1550	3 1/2 x 4 1/2	32x4 32x4 1/2	W	Super Truck, 100	5	5300	4 1/2 x 6	36x5 40x12	W
Mac, AB Chain	1 1/2	3000	4 x 5	36x4 36x3 1/2	C	Pittsburgher, B 21	2 1/2-3	3800	4 1/2 x 5 1/2	32x4 32x4 1/2	W	Super Truck 150	7 1/2	6300	5 x 6	36x6 40x7 1/2	W
Mac, AB D.R.	2	3300	4 x 5	36x4 36x4	D	Pony	1 1/2	400	2 1/2 x 4	28x3 28x3 1/2	W	Texas, A38	1 1/2	1095	3 1/2 x 5	35x4 35x4	I
Mac, AC Chain	3 1/2	4950	5 x 6	36x5 40x5 1/2	C	Powder, F	1 1/2	...	4 1/2 x 5 1/2	36x5 36x6	W	Texas, B39	1 1/2	2095	3 1/2 x 5	36x5 36x5	I
Mac, AC Chain	5	5500	5 x 6	36x6 40x6 1/2	C	Powder, C	1 1/2	...	4 1/2 x 5 1/2	36x5 40x10	W	Tiffin, GW	1 1/2	2095	4 1/2 x 5 1/2	36x4 26x3 1/2	W
Mac, AC Chain	6 1/2	5750	5 x 6	36x6 40x7 1/2	C	Preemcar, B-143	1 1/2	2475	3 1/2 x 5	36x5 36x5 1/2	W	Tiffin, MW	2 1/2	3580	4 1/2 x 5 1/2	36x5 40x5 1/2	W
Mac, AC Chain	7 1/2	6900	5 x 6	36x7 40x7 1/2	C	Rainier, R-11	1 1/2	2450	3 1/2 x 5	35x5 35x5 1/2	W	Tiffin, FW	2 1/2	4700	4 1/2 x 6	36x6 40x6 1/2	W
Mac, Trac, AB	5	3400	4 x 5	36x4 36x4	C	Rainier, R-15	3 1/2	4550	4 1/2 x 5 1/2	36x5 36x5 1/2	W	Tiffin, F50	5	8550	4 1/2 x 6	36x6 40x6 1/2	W
Mac, Trac, AC	7	4950	5 x 6	36x5 40x5 1/2	C	Rainier, R-19	1 1/2	2800	3 1/2 x 5	34x3 1/2 34x5	W	Tiffin, F60	6	9050	4 1/2 x 6	36x6 40x12	W
Mac, Trac, AC	10	5500	5 x 6	36x6 40x6 1/2	C	Rainier, R-16	1 1/2	2950	3 1/2 x 5	34x3 1/2 34x5	W	Titan, HT	6 1/2	4550	4 1/2 x 6	36x5 40x5 1/2	I
Mac, Trac, AC	13	5750	5 x 6	36x6 40x12	C	Rainier, R-18	2 1/2	3600	4 1/2 x 5 1/2	34x4 34x6	W	Titan, HD	6 1/2	5400	4 1/2 x 6	36x5 40x6 1/2	I
Mac, Trac, AC	15	6000	5 x 6	36x7 40x7 1/2	C	Rainier, R20	2 1/2	3600	4 1/2 x 5 1/2	34x4 34x6	W	Titan, TS	6 1/2	5400	4 1/2 x 6	36x5 40x6 1/2	I
Mapleleaf, AA	2	4150	4 x 5 1/2	36x4 36x7	W	Rainier, R17	5	6250	4 1/2 x 6	36x6 36x6 1/2	W	Tower, J	2 1/2	3000	4 1/2 x 6	35x5 38x7	W
Mapleleaf, BB	3	4775	4 1/2 x 5 1/2	36x4 36x4 1/2	W	Ranger, TK-28-2	2	...	3 1/2 x 5	36x6 36x6 1/2	W	Tower, G	3 1/2	3475	4 1/2 x 5 1/2	36x4 36x7	W
Mapleleaf, CC	4	5770	4 1/2 x 5 1/2	36x5 36x5 1/2	W	Roe, F	3 1/2-11	1885	4 1/2 x 4 1/2	34x4 34x4 1/2	B	Tower, C	3 1/2	4400	4 1/2 x 5 1/2	36x5 36x5 1/2	I
Mapleleaf, DD	5	6825	4 1/2 x 5 1/2	36x6 40x6 1/2	W	Roe, F	1 1/2	2500	4 1/2 x 5 1/2	36x3 1/2 36x5	I	Transap, 20	1 1/2	1850	3 1/2 x 5 1/2	34x3 1/2 34x4	I
Master, JW	1 1/2	2680	4 1/2 x 5 1/2	34x3 1/2 34x5	W	Republic, 10A	1 1/2	3200	3 1/2 x 5	36x4 36x4 1/2	I	Transap, 30	1 1/2	2250	3 1/2 x 5 1/2	36x3 1/2 36x5	I
Master, W	2 1/2	3290	4 1/2 x 5 1/2	36x4 36x7	W	Republic, 20B	1 1/2	1695	3 1/2 x 5	35x5 35x5 1/2	I	Transap, 50	2 1/2	2785	4 1/2 x 5 1/2	36x4 36x7	I
Master, D	2 1/2	3540	4 1/2 x 5 1/2	36x4 36x7	D	Republic, 10Exp. H	1	2095	3 1/2 x 5	35x5 35x5 1/2	I	Transap, 70	3 1/2	4105	4 1/2 x 6	36x5 36x10	I
Master, A	3 1/2	4190	4 1/2 x 6	36x5 40x5 1/2	D	Republic, 11X	1 1/2	2295	3 1/2 x 5	34x3 1/2 34x5	I	Traylor, E	1 1/2	2500	3 1/2 x 5 1/2	34x3 1/2 34x5	W
Master, B	3 1/2	4640	4 1/2 x 6	36x5 40x5 1/2	D	Republic, 11X	2 1/2	2795	4 1/2 x 5 1/2	36x4 36x7	I	Traylor, C	2	3000	4 x 5 1/2	36x4 36x7	W
Master, F	5	5290	4 1/2 x 6	36x6 40x6 1/2	D	Republic, 20	3 1/2	3845	4 1/2 x 5 1/2	36x5 36x10	I	Traylor, D	3				

Specifications of Current Motor Truck Models—Continued

NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive
				Front	Rear						Front	Rear						Front	Rear	
Ward-LaF., 5A	5	\$3590	5 x 6 1/2	36x6	36x6	W	Wichita, O	3 1/2	\$1000	4 1/2 x 6	36x5*	36x5d*	W	Winther, 430	1 1/2	\$2850	3 1/2 x 5	32x4	32x4	I
Watson, E	1	1865	3 1/2 x 5 1/2	34x4 1/2	34x4 1/2	W	Wichita, S	1	5000	4 1/2 x 6	36x6	40x6	W	Winther, 39	2 1/2	2450	3 1/2 x 5	34x3 1/2	34x5	I
Watson, N	1 1/2	4250	4 1/2 x 5 1/2	36x5	36x5	W	Wichita, AA	1 1/2	2100	3 1/2 x 5 1/2	36x4	36x4	W	Winther, 49	2	3250	4 x 5	34x4	34x4	I
Western, W1 1/2	1 1/2	2550	4 1/2 x 5 1/2	36x3 1/2	36x5*	W	Wichita, B	1 1/2	2775	4 1/2 x 6	36x4	36x4	W	Winther, 70	3 1/2	4200	4 x 5	36x5	36x5	I
Western, L1 1/2	1 1/2	2350	3 1/2 x 5 1/2	36x3 1/2	36x5*	W	Wichita, D	2 1/2	3300	4 1/2 x 6	36x4	36x3 1/2d	W	Winther, 450	4	3690	4 x 5	34x5	36x6	I
Western, W2 1/2	2 1/2	2350	4 1/2 x 5 1/2	36x4	36x7	W	Wichita, E	3 1/2	4250	4 1/2 x 6	36x5*	36x5d*	W	Winther, 109	4	3250	4 1/2 x 6	36x6	40x5 1/2	I
Western, L2 1/2	2 1/2	3250	4 1/2 x 6	36x4	36x7	W	Wichita, F	5	5200	4 1/2 x 6 1/2	36x5	40x6	W	Winther, 140	7	5900	5 x 6	36x6	40x7 1/2	I
Western, W3 1/2	3 1/2	4250	4 1/2 x 6	36x5	40x5 1/2	W	Wilson, F	1 1/2	2270	3 1/2 x 5	36x3 1/2	36x5	W	Wisconsin B	1	4	4 1/2 x 5 1/2	34x5 1/2	34x5 1/2	W
White, 15	2	2400	3 1/2 x 5 1/2	34x5 1/2	34x5 1/2	B	Wilson, EA	2 1/2	2825	4 1/2 x 5 1/2	36x4	36x7	W	Wisconsin C	2 1/2	2750	4 1/2 x 5 1/2	36x3 1/2	36x5 1/2	W
White, 20	2	3250	3 1/2 x 5 1/2	36x4	36x7	D	Wilson, G	3 1/2	3835	4 1/2 x 5 1/2	36x5	36x5 1/2	W	Wisconsin D	2 1/2	3250	4 1/2 x 5 1/2	36x3 1/2	36x5 1/2	W
White, 40	3 1/2	4200	3 1/2 x 5 1/2	36x5	40x5 1/2	D	Wilson, H	5	4820	4 1/2 x 6	36x6	40x6 1/2	W	Wisconsin E	3 1/2	3250	4 1/2 x 5 1/2	36x3 1/2	36x5 1/2	W
White, 45	5	5000	4 1/2 x 5 1/2	36x6	40x6 1/2	D	Winther, 751	5 1/2	1795	3 1/2 x 5	34x4 1/2	35x5 1/2	I	Witt-Will, N	1 1/2	2750	3 1/2 x 5	32x3 1/2	36x5*	W
White Hick., E	1	1450	3 1/2 x 5	34x5	34x5 1/2	W	*2-cyl. 16-cyl. 18-cyl. All others, not marked, are 4-cyl. Trac., Tractor. **Canadian made.													
White Hick., H	1 1/2	1750	3 1/2 x 5	36x3 1/2	36x5	W	Final Drive: W—Worm, I—Internal Gear.													
White Hick., K	2 1/2	2350	4 1/2 x 5 1/2	36x4	36x5	W	C—Chains, D—Double Reduction, B—Bevel.													
Wichita, K	1	2300	3 1/2 x 5 1/2	36x3*	36x4*	W	Four-Wheel, E—External Gear. *Tires—optional.													
Wichita, L	1 1/2	2600	3 1/2 x 5 1/2	36x3 1/2	36x5*	W	†Pneumatic Tires. All others solid. ‡Price includes body.													
Wichita, M	2	2800	3 1/2 x 5 1/2	36x3 1/2	36x6*	W	§—Price includes several items of equipment.													
Wichita, R	2 1/2	3000	3 1/2 x 5 1/2	36x4	36x7*	W								Yellow Cab M21	3 1/2	4150	4 1/2 x 5 1/2	36x5	36x10	I
Wichita, RX	2 1/2	3600	4 1/2 x 6	36x4*	36x8*	W								Yellow Cab M41	1 1/2	2350	3 1/2 x 5	34x4 1/2	34x4 1/2	B

Farm Tractor Specifications and Prices

TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Flow Capacity	TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Flow Capacity	TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Flow Capacity
All-In One...	16-30	\$1975	3	Clim.	4-5 x 6 1/2	GDK	2-4	Gray... 1920	18-36	\$2000	3	Wauk	4-4 1/2 x 6 1/2	Gas.	4	Peat...	12-20	\$1800	4	Wauk	4-4 1/2 x 5 1/2	GorK	2
Alia-Chalm. B	6-12	925	2	LeR.	4-3 1/2 x 4 1/2	Gas.	1-2	Ground Hog	19-31	2000	4	Erd.	4-4 x 6	GorK	3	Prairie Dog...	9-18	650	3	Wauk	4-3 1/2 x 5 1/2	Gas.	2
Alia-Chalm. G.P.	6-12	850	2	LeR.	4-3 1/2 x 4 1/2	Gas.	1-2	Gr. Western St.	20-30	1950	4	Beav.	4-4 1/2 x 6	K.	4	Prairie Dog...	15-30	1250	4	Wauk	4-4 1/2 x 5 1/2	Gas.	3
Alia-Chalm.	12-20	2150	2	Mid. W	4-4 1/2 x 5 1/2	Gas.	2-3	Hart-Parr... 20	20	905	4	Own	2-5 1/2 x 6 1/2	K.D	3	Ranger Cul.	8-16	...	4	LeR.	4-3 1/2 x 4 1/2	Gas.	1
Alia-Chalm.	18-20	1495	4	Own	4-4 1/2 x 6 1/2	GorK	3-4	Hart-Parr... 30	30	1595	4	Own	2-6 1/2 x 7	K.D	3	Reed...	15-30	2250	4	Dom	4-4 1/2 x 6	K.	3-4
Alia-Chalm.	10-18	875	4	Own	4-4 1/2 x 6 1/2	GorK	3-4	Heider... D	9-16	1170	4	Wauk	4-4 1/2 x 5 1/2	K.D	2	Reed... A-1	15-36	2400	4	Dom	4-5 x 6	Gas.	4
Allwork... 2-G	14-28	...	4	Own	4-5 x 6	GorK	3	Heider... C	12-20	1395	4	Wauk	4-4 1/2 x 6 1/2	G.K	3	Reliable...	10-20	985	4	Own	2-6 x 7	Ker.	2
Allwork...	14-28	...	4	Own	4-5 x 6 1/2	GorK	3	Heider... Cult	6-10	1050	4	LeR.	4-3 1/2 x 4 1/2	G.K	1	Rez...	12-25	1600	4	Wauk	4-4 1/2 x 5 1/2	GorK	3
Andrews, K.D.	18-36	2500	4	Clim.	4-5 x 6 1/2	GorK	3-4	Hicks...	20-30	...	4	Wauk	4-4 1/2 x 6	KorK	3	Russell...	12-24	1500	4	Own	4-4 1/2 x 5 1/2	GorK	2-3
Appleton...	12-20	1500	4	Buda	4-4 1/2 x 5 1/2	G.K	2-3	Huber Light 4	12-25	1185	4	Wauk	4-4 1/2 x 5 1/2	GorK	3	Russell...	15-30	2200	4	Own	4-5 x 6 1/2	GorK	3-4
Aro... 1921	3-5	550	4	Clim.	4-5 x 6 1/2	G.K	6	Huber Super 4	15-30	1885	4	Midw.	4-4 1/2 x 6	Gas.	3	Russell...	20-35	3000	4	Own	4-5 1/2 x 7	GorK	4-5
Aultman-T...	15-30	2200	4	Clim.	4-5 x 6 1/2	G.K	6	Illinois, Super	18-36	2500	4	Clim.	4-5 x 6 1/2	G.K	4	Samson... M	...	995	4	Nov.	4-4 x 5 1/2	G.K	2
Aultman-T...	22-45	3550	4	Own	4-5 1/2 x 8	G.K	6	Imperial... E	40-70	5000	4	Own	4-7 1/2 x 9	G.K, D	10	Sandusky...	10-20	1250	4	Own	4-4 1/2 x 5 1/2	G.K, D	2
Aultman-T...	30-60	5000	4	Own	4-7 x 9	G.K, D	8	Indiana... F	6-10	...	2	LeR.	4-3 1/2 x 4 1/2	Gas.	1-2	Sandusky...	15-35	1750	4	Own	4-5 x 6 1/2	G.K, D	4
Automet. B-3.	12-24	1785	4	Herc.	4-4 x 5 1/2	G.K	2-3	International...	8-16	1000	4	Own	4-4 1/2 x 5	G.K, D	2	Shawnee Com.	6-12	...	2	LeL.	4-3 1/2 x 4 1/2	Gas.	10
Avery, SR, Cult	5-10	...	3	Own	4-4 x 4	G.K	2	International...	15-30	1550	4	Own	4-5 1/2 x 8	G.K, D	4	Shawnee Com.	9-18	...	2	Gray	4-3 1/2 x 5	Gas.	10
Avery... Cult-C	5-10	...	3	Own	4-4 x 4	G.K	2	J-T... N	20-40	3485	2	Chief	4-4 1/2 x 6	G.K, D	3-4	Shelby...	10-20	...	4	Erd.	4-4 x 6	GorK	2-3
Avery... B	8-16	...	4	Own	2-5 1/2 x 6	G.K, D	2-3	Klumb... F	16-32	1650	4	Clim.	4-5 x 6 1/2	...	...	Short Turn...	20-40	1500	3	Beav.	4-4 1/2 x 6	G.K	3
Avery... C	12-20	...	4	Own	4-4 1/2 x 6	G.K, D	2-3	LaCrosse... M	6-12	900	4	Own	2-4 x 6	G.K	1	Square T... A	18-35	2075	3	Clim.	4-5 x 6 1/2	G.K	3
Avery...	12-25	...	4	Own	4-4 1/2 x 6	G.K, D	3-4	LaCrosse... G	12-24	1250	4	Own	2-6 x 7	GorK	3	Steady Pull...	12-24	1485	4	Beav.	4-4 x 5	Gas.	3
Avery...	14-28	...	4	Own	4-4 1/2 x 7	G.K, D	4-5	Lauson...	12-25	1495	4	Midw.	4-4 1/2 x 5 1/2	Gas.	3	Stinson... 4E	18-36	1335	4	Beav.	4-4 1/2 x 6	G.K	4
Avery...	18-36	...	4	Own	4-4 1/2 x 7	G.K, D	4-5	Lauson...	15-25	1685	4	Beav.	4-4 1/2 x 6	GorK	3-4	Stone...	20-40	...	4	Beav.	4-4 1/2 x 6	G.K	4
Avery...	25-50	...	4	Own	4-4 1/2 x 7	G.H, D	5-6	Lauson...	15-25	1885	4	Beav.	4-4 1/2 x 6	GorK	3-4	Tiegs...	15-27	2625	4	Wisc.	4-4 1/2 x 6	Gas.	3-4
Avery...	45-65	...	4	Own	4-7 1/2 x 8	G.K, D	8-10	Leader... 21	12-24	1095	4	Own	2-6 x 6 1/2	G.K, D	2-3	Titan...	10-20	1000	4	Own	2-6 1/2 x 8	G.K, D	3
Bates...	15-25	...	4	Own	4-4 1/2 x 6	Ker.	3	Leader... N	12-18	1095	4	Own	2-6 x 6 1/2	G.K, D	2-3	Topp...	30-45	3500	4	Wauk	4-4 1/2 x 6 1/2	Gas.	3-4
Bates Mule. F	18-25	...	2	Midw	4-4 1/2 x 6 1/2	Gas.	3	Leader... 21	12-18	1095	4	Own	2-6 x 6 1/2	G.K, D	2-3	Toro Cultivator	6-10	...	3	LeL.	4-3 1/2 x 4 1/2	Gas.	2
Bates Mule G	15-25	...	2	Midw	4-4 1/2 x 6 1/2	Gas.	3	Leader... N	12-18	1095	4	Own	2-6 x 6 1/2	G.K, D	2-3	Townsend...	10-20	1200	2	Own	4-6 1/2 x 7	Ker	2-3
Bates Mule H	25-35	...	2	Midw	4-4 1/2 x 6 1/2	Gas.	3	Leader... N	12-18	1095	4	Own	2-6 x 6 1/2	G.K, D	2-3	Townsend...	15-30	1800	2	Own	4-7 x 8	Ker	3-4
Beau...	8-16	...	1	Own	4-3 1/2 x 4	G.K	2-3	Leader... GU	18-35	2775	4	Clim.	4-5 x 6 1/2	G.K	3-4	Townsend...	25-50	3000	2	Own	4-8 1/2 x 10	Ker	4-8
Beeman... G	2-4	315	4	Own	4-3 1/2 x 4	G.K, D	1 1/2	Leonard... E	20-30	2530	4	Buda	4-5 x 6 1/2	G.K	3	Traction Motor	40-50	...	4	LeL.	8-3 1/2 x 5	Gas.	4-5
Best...	30	...	2	Own	4-4 1/2 x 6 1/2	G.K, D	4	Liberty... A	18-32	2475	4	Clim.	4-5 x 6 1/2	Gas.	6	Traylor... TB	6-12	715	4	Erd.	4-3 1/2 x 4 1/2	Gas.	1
Best...	60	...	2	Own	4-4 1/2 x 6 1/2	G.K, D	8-9	Linn... W	60	5600	4	Wauk	4-5 x 6 1/2	G.K	6	Triumph... H	18-36	2450	2	Erd.	4-4 1/2 x 6	Ker.	4
Boring... 1921	30	1850	3	Wauk	4-4 1/2 x 6 1/2	GorK	4	Little Giant. B	16-22	2200	4	Own	4-4 1/2 x 5	K.	6	Trundar... 10	25-40	3750	2	Wauk	4-5 x 6 1/2	GorK	4
Burn-Oil 1921	15-30	1650	4	Own	2-6 1/2 x 7	GorK	3-4	Little Giant. A	26-35	3300	4	Own	4-5 1/2 x 6	K.	6	Turner... 1921	14-25	1295	4	Buda	4-4 1/2 x 5 1/2	G.K	3
Capital...	15-30	1000	2	Own	4-4 1/2 x 6	Gas.	3	Lombard...	85-150	...	2	...	4-4 1/2 x 6 1/2	Gas.	16	Twin City...	12-20	...	4	Own	4-4 1/2 x 6	G.K	3

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for
DEALERS, JOBBERS AND GARAGEMEN

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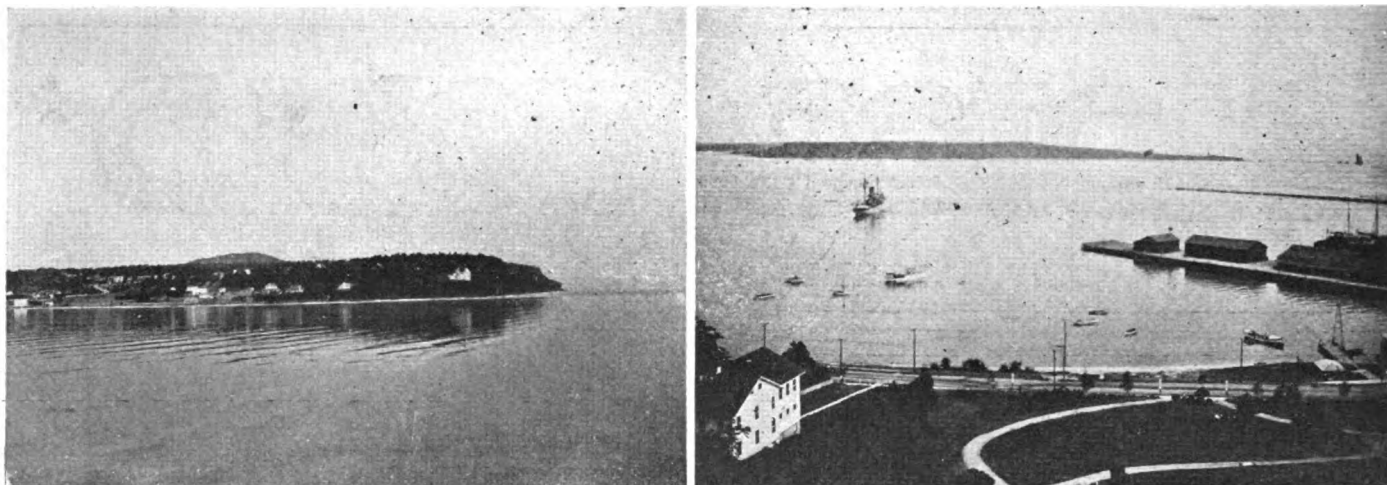
No. 2

A Good Hot Weather Drink



And good for any other weather, too. They started it at the A. E. A. convention at Mackinac Island

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Mackinac Island, Where White Man's History Has Been in the Making Since 1670. The A. E. A. Made Some More

At the left the island as the delegates saw it as they approached by steamer. At the right, looking from the island over the Straits of Mackinac. The warship is the U.S.S. Willamette, training vessel of the Naval Reserve and formerly the ill-fated Eastland of the Chicago River disaster.

A. E. A. Plans Trade-Wide Sales Promotion

Votes \$40,000 for First Year

Educational Development of Jobbers, Jobber Salesmen, Dealers and Garagemen Intended to Broaden and Stabilize Outlet for Products of Industry—Full-Time Expert Will Direct the Work—Sales Promotion Week, August 6-13, a Preliminary Move—More Than 400 Delegates, Guests and Families, Representing 232 Companies, Attend Mackinac Three-Day Convention

By NEAL G. ADAIR

MACKINAC ISLAND, MICH., July 8.

A TRADE-WIDE educational movement, intended to broaden the outlet for automotive equipment merchandise by training the men handling it to sell more intelligently and vigorously, was launched this week by the Automotive Equipment Association. Forty thousand dollars was appropriated for the first year's work and a permanent committee was appointed to direct the undertaking.

The committee will employ a sales promotion director and as many assistants as may be necessary to carry the sales promotion idea to jobbers and their salesmen and through them to the dealers, garagemen and others making up the retail division of the business.

THE plan, details of which are yet to be worked out, contemplates a visualization for jobbers, their salesmen and retailers, of correct and aggressive display, selling and other fundamental elements of automotive equipment, or accessory merchandising. The

work probably will be developed section by section throughout the country, with the sales promotion director and his assistants personally presenting the idea to groups of jobbers and their salesmen and the latter carrying it on to their trade. Undoubtedly there will also

be literature supporting the personal work of the sales promotion staff.

The association pledged itself to carry on the work for at least a year, but the special committee named is a permanent one and the plan of the association is to make

the sales promotion permanent also.

On the committee were named Robert A. Stranahan, president of the association and president of the Champion Spark Plug Co., Toledo; Howard M. Dine of Dine-De Wees Co., Canton, O., jobber; N. H. Oliver of Metal Specialties Co., Chicago; W. W. Lowe of Electric Appliance Co., Chicago, jobber; L. R. Safford of McQuay-Norris Mfg. Co., St. Louis. The work of the committee will be facilitated through the fact that the home cities of the members are all within a night's journey or less of association headquarters in Chicago.

The proposal for the sales promotion movement, made by President Stranahan at the opening meeting Wednesday, created unanimous enthusiasm among both manufacturers and jobbers. The jobbers agreed to get actively behind the work of carrying out the development through their salesmen and retailers.

There was general recognition of the fact that in this phase of the movement will be found its strength—or weakness. *Not only the jobbers who attended the convention and put themselves on record favoring the plan, but all jobber members of the association will have to put thought, time and money into the execution of the movement if it is to become the great force it can be made to stabilize and build up the industry and to assure adequate profits for both wholesale and retail merchandising of automotive equipment.*

If properly directed and supported the sales promotion plan can be made one of the great co-operative movements of present-day business. It is a you-help-me-and-I'll-help-you proposition all the way through. Automotive dealers and garagemen of various classes who handle accessories, displaying them compellingly and really trying to sell them, make good profits on their investment and effort. Others, more numerous than the first class, who either don't sell or only half sell accessories, ought to jump at the chance to be shown how to make these profits. If more retailers make more money selling equipment, selling to people who don't buy now because nobody tries to sell them, jobbers' businesses will grow with the retailers'. Finally, the expansion process, with profits attached all along the line, will reach the manufacturer, enabling him to use full plant and organization capacity, thus reducing overhead and increasing income.

The dealer or garageman wants to know better than he knows now how to attract attention to equipment

Ten Big Things Done at A. E. A. Convention

- 1—SALES promotion movement inaugurated, with \$40,000 appropriation for first year, to co-ordinate work of manufacturers, jobbers, jobber salesmen and dealers in broadening retail outlet for automotive equipment. This will be an educational campaign, in charge of a permanent committee and a permanently employed staff of merchandising experts, intended to show the trade HOW TO SELL the products of the industry.
- 2—SALES Promotion Week, Aug. 6-13, authorized and jobbers pledged, with assistance of manufacturers, to make a special effort to start stimulation of automotive equipment retailing as preparatory move for permanent campaign.
- 3—DEALERS urged to increase sales and profits in automotive equipment lines by paying employees commissions in addition to salaries or wages.
- 4—CODE of fair trade practices adopted. Motor World will print the code in next week's issue.
- 5—APPOINTMENT of a secretary of committees authorized, this official, with assistance, to be attached to commissioner's office at Chicago and to relieve standing committees of the detail of their work.
- 6—PRELIMINARY steps taken for making present part-time freight traffic bureau of association a permanent, full-time bureau.
- 7—SUGGESTION made for creation of new class of membership for manufacturers' agents. Action likely in November.
- 8—MEMBERS pledged to exert influence through letters, telegrams and direct appeals by travelers to bring about reduction in hotel rates.
- 9—Jobbers adopted resolution approving reasonable charges by manufacturers on direct shipments to dealers, where circumstances warrant. Special reference made to justice of charges on less than unit package shipments. Manufacturers, in turn, adopted resolution promising to work toward a reduction of size of unit packages.
- 10—VOTED to hold next spring convention at Colorado Springs.

merchandise, how to interest people in it and how to show its economy, utility, convenience or beauty. The jobber salesman wants to know how to show the retailer how to do these

things and how to show him also the opportunity for profit in selling equipment. The jobber wants to know how to train his salesmen to help the retail trade more effectually than they have been helping them. The manufacturer wants to know how to reach the ultimate judge of his product, the automobile and truck owning public, with the true story and the whole story of his merchandise. The sales promotion plan promises to fulfill these wants. The idea is right. But only complete co-operation of manufacturers, their traveling men, jobbers, their salesmen and the dealers can make the idea over into an accomplishment.

Following this greatest meeting in the history of the Automotive Equipment Association the automotive equipment industry has its greatest opportunity to get started toward an assured prosperous future. *What is it going to do—what are you, manufacturers, jobbers, dealers—going to do with the opportunity?*

Sales Promotion Week

One optimistic indication of the manufacturers' and jobbers' determination to take hold of the plan and make it go somewhere was the rousing endorsement of a proposal by D. J. Barrill of the Hail-Smith Metal Goods Co. for a Sales Promotion Day, followed by a Sales Promotion Week, when manufacturers and jobbers and their travelers would cooperate to make a sort of preliminary start on the big undertaking. Realizing that the sales promotion committee has to select a director and, with him, work out the details of the plan before any definite move can be made, Barrill suggested that the trade might show its support of the movement and, incidentally, stimulate mid-summer equipment sales by setting aside Saturday, August 6, as Sales Promotion Day, and Monday to Saturday, August 8-13, as Sales Promotion Week, when travelers would carry the idea in person to the retail trade and help stage special efforts to move retailers' stocks. Barrill felt that a campaign of this sort would help to prevent enthusiasm for the sales promotion movement getting cold while the committee is getting ready to start it. Some jobbers thought a September date would be better, but the vote was strong on a motion for the August dates and the Day and Week will be held all over the country and in Canada, where jobbers can make the necessary arrangements.

Favor Commissions on Sales

In supporting the sales promotion plan the association showed a sentiment in favor of retail commissions on equipment sales. Several cases were cited of dealers and garagemen who have made sizable "velvet" profits on accessories by paying commissions above their regular salaries or wages to salesmen, mechanics and even office employees. The supporting resolution urged upon the dealer "a

proper display of merchandise and the payment of a commission to his employees in addition to their regular remuneration."

Funds for the sales promotion work were provided by a draft of \$15,000 on the treasury and an assessment of \$50 on each member, the latter yielding \$25,000. Without a formal vote the members promised an additional \$50 each if the aggregate of \$40,000 is not sufficient to inaugurate the movement and carry it on for a year.

Dealers Not Selling

In making the initial proposal for the sales promotion plan President Stranahan told of a trip through three states to learn whether dealers and garagemen would try to sell him, traveling as an ordinary tourist, anything in the line of accessories. They didn't try.

Stranahan made about 50 calls each in Florida, New York and Ohio, driving, successively, a Locomobile, Overland and Ford. All the cars were bare of accessories. He stopped for gas and oil, overnight storage and occasionally small services and in no case was he asked to buy anything he had not inquired for. Stranahan said he believed the sale of automobile conveniences could be increased at least 33 1/3 per cent by selling effort on the part of dealers. And he thought the payment of commissions to dealer and garage employees, to interest them in accessory sales as something worth while to them, would help. He asked that the influence of the association be put behind a recommendation to

A. E. A. Pledge to Support Sales Promotion Program

WHEREAS, we, the individual members of the A. E. A. firmly believe in the sales promotion program and fully realize that to insure the successful accomplishment of this plan, our Committee in charge of this work must have the enthusiastic support of manufacturing and jobbing members through our respective sales organizations, and

Whereas, our plan incorporates a proper display of merchandise and the payment of a commission by the dealer to his employees in addition to their regular remuneration,

Therefore, Be It Resolved, that immediately upon our return from this convention, we direct our Sales Departments to actively support this work of the A. E. A. and instruct our salesmen in the purposes of this Sales Promotion plan so that they will spread the propaganda of increased accessory sales by the dealer, and

Be It Further Resolved, That we hereby pledge ourselves to the consistent, energetic and wholehearted support of this Sales Promotion Program for a period of twelve months.

dealers along this line. He asked for jobbers' support of the sales promotion movement and told the manufacturers they must look at the market as their market, not the individual jobber's market, and take a hand in developing it by putting their influence and facilities at the disposal of the association.

Vice-president Dine told the convention that his own company had a sales promotion plan which cost effort and money, but it paid.

J. Ernest Millen of John Millen & Son, Ltd., Montreal, jobber and president of the association board of directors, declared "together we can accomplish this thing." Others who spoke for the plan were N. H. Oliver and L. R. Safford, who were later appointed to the special committee, and George L. Brunner of the Brunner Mfg. Co. Ray W. Sherman, executive editor of the Class Journal papers, declared that the possibilities of automotive equipment sales had never even been scratched, and said selling effort would do it. He told of a Michigan garageman who, during the past year, had sold at a profit of \$1800 three hundred of a certain accessory. Previously the garageman had done only a garage business and the \$1800 was "velvet." He believed the sales promotion plan would widen the third and final outlet in the process of marketing automotive equipment.

Sales Promotion Preparation

The program of the convention was arranged to lead logically up to final



Howard M. Dine, vice-president, who was a vigorous supporter of sales promotion



Leaders in the Convention Proceedings

Robert A. Stranahan, president, who fathered the sales promotion plan



William M. Webeter, commissioner, who presided over the meetings

Some of the A. E. A. Directors on the Porch at Mackinac



C. ROBERT CHURCHILL
Electric Appliance Co.,
New Orleans



WILLIAM VON ELM
E. A. Laboratories,
New York



FRED CAMPBELL
Fred Campbell Auto
Supply Co., St. Louis



GEO. L. BRUNNER
Brunner Mfg. Co.,
Utica, N. Y.

adoption of the sales promotion plan. There were two outside speakers, one of whom presented a word and chart picture of economic conditions and sales opportunities, while the other told how to develop men, which he classed as the necessary sequel to the development of machinery which has marked the progress of the last two generations.

Sales Possibilities

The first speaker was Charles C. Parlin, manager of the commercial research bureau of the Curtis Publishing Co. of Philadelphia, who gave the chart talk. After picturing the trends of business under present conditions and showing the enormous buying power of the country, Parlin declared the supreme business need of the day is to create a selling atmosphere in industry. *He said the most important task for every man selling merchandise was to sell again the people he had already sold.* Additional customers, he said, would come in some cases voluntarily, in other cases more easily if old customers were retained on a basis of satisfaction.

Parlin scouted any possibility of the elimination of jobbers from the American plan of doing business. Because of the great number of retail outlets, he said, manufacturers must deal with retailers through wholesale organizations.

Parlin made two pertinent suggestions to the jobbers:

1—Concentrate on lines that are profitable to sell because of discounts, local conditions, etc.

2—Meet competition by intensive cultivation of the jobbers' home territory and the home territories of branches. "Serve your trade and know it," said the speaker.

Harry C. Spillman, associated with the



Left to Right
A. D. McMULLEN
Motor Mercantile Co., Salt Lake City
L. A. CAVANAUGH
Motor Car Supply Co., Ltd.,
Calgary, Canada
GEORGE L. BROWN
Johnstown Automobile Co.,
Johnstown, Pa.

Remington Typewriter Co. in a sales educational capacity, told the convention that "men to-day are far less efficient than machinery." The big sales problem of the day, he said, was development of men.

Spillman, a picturesque speaker who had his audience alternately laughing and applauding and who was cheered when he sat down—something unusual at a A. E. A. convention—deplored the tendency of the day to rate everything by horsepower, "because horsepower is

the power of a horse from the neck back." He declared business to-day ought to make its chief task developing men—from the neck up.

Spillman told of three things every man who handles men must do for his men—train their minds, train their tongues, touch their hearts.

1—Inspiration, train your men's minds. Spillman said he would rather have on a sales staff a man who was an "inexperienced success" than one who was an "experienced failure." The greatest evil of the day, he declared, was misplaced men. He advised his audience to hire no men, regardless of their business experience, without a natural inclination to sell and urged that once a sales organization is assembled its members be addressed frequently by outside men. He said salesmen must be taught "to expect in larger units" and cited cases to prove that men who had been content to earn \$50 when shown how they could earn \$100 learned to expect it and earned it practically every week. He urged hard-working days with many calls "exposing salesmen to sales," telling the story of a house which avoided bankruptcy and built a dying into a growing business by paying its salesmen 10 cents a call, 25 cents a demonstration and a commission on sales. The calls and demonstrations exposed the men to sales.

2—Train your men's tongues. Spillman declared language was "a triumph or a tragedy in the life of every salesman." Possible customers, he said, don't buy an article because they don't know what it will do and they don't know because a salesman can't tell them. His language equipment to explain an article and its use is deficient. Spillman said he would "fire" every man who didn't master a firm's advertising literature. He urged reading of the Old Testament for

clear and forceful language and suggested that sales managers and others handling correspondence could get some practical suggestions out of the Epistles of Paul.

3—Touch your men's hearts. There can be nothing great in any organization unless the hearts of the men are in their work, Spillman said. "Humanize your organization, multiply yourself in your men," said the speaker. "Don't merely know your merchandise; love it and love to sell it."

Arbitration and Traffic

The two outside speakers and the sales promotion program gave the delegates much to think about, but in semi-routine subjects the convention also was important. The report of Commissioner William M. Webster showed, among other things, the valuable work done by the arbitration functions of the association. Cases of claims of manufacturers against jobbers, and vice versa, running into many thousands of dollars were kept out of the courts, at great saving to the companies which otherwise would have become litigants. Importance of the work of the freight and traffic bureau also was shown in the report that in six months it had investigated 3651 claims, covering overcharges of \$8,300 for 73 members and had recovered for them \$2,800. The commissioner suggested that the man now giving part of his time to the bureau be retained later on at full time, with necessary office help, and said he would bring the proposal up at the November meeting.

The commissioner told of the increasing burdens on committee members in handling detailed work and suggested employment of a secretary of committees to give all his time to work at association headquarters. This was authorized.

Lower Hotel Rates

The commissioner told of the deterring effect of high hotel rates—which have not seemed to take note of decreased food and wage costs—on traveling salesmanship. He urged individual members, by letters, telegrams and through their travelers, to bring pressure to bear upon hotels they patronize to reduce their rates. Several members told of getting better rates by taking their men from hotels they had been patronizing to others which were bidding for business.

Hoover and Trade Associations

The commissioner reported that Secretary of Commerce Hoover, with the co-operation of Attorney General Daugherty, was conducting a survey to "separate the sheep from the goats" among trade associations. Mr. Hoover stated, he said that the majority of trade associations were doing constructive work for the public good and should have the benefit of legislation, which he will suggest, to make certain the lines of activity which they can follow without molestation. A committee consisting of President Stranahan and Directors George L. Brunner and William Von Elm was named to draft and forward the association's attitude to Secretary Hoover.

Vigilance and Trade Practices

Noah Van Cleef for the vigilance committee reported action which had eliminated some trade abuses and invited the members to co-operate by reporting cases for investigation. Fred R. Hall said the work of the standardization committee was being redrafted to conform to the sales promotion plan. On this committee R. J. Cahall was appointed in place of George L. Brown of Pennsylvania and W. A. White of Indiana in place of E. M. Cummings of Michigan.

The code of fair trade practices, drawn up by the directors and adopted by the convention, contains 35 clauses covering relations between manufacturers, between manufacturers and jobbers and between jobbers. Owing to its length, its publication has been deferred to next week.

Sales Promotion

N. H. OLIVER of the board of directors told the A. E. A. convention of a garageman who was induced to offer his employees 6 per cent commission for selling a certain accessory. He had 45 cars in his place every night for live storage. One night the accessory in question was installed on 10 cars. Nine owners bought it. During the following week the accessory was put on all 45 cars, with an installation charge of 50 cents above the list price, and 35 owners bought it and became silent salesmen by driving around town and telling their friends about it.

The commission offered the garage employees brought out their latent salesmanship and they induced the car owners to purchase the accessory despite the fact that several of them objected in the first place to its being installed without their permission.

The divisional meetings of manufacturers and jobbers gave evidence of the growing spirit of co-operation between the two sides of the association. After the jobbers had generously classed direct shipments to dealers, particularly of less-than-unit packages, as a burden which should not be imposed upon manufacturers without adequate compensation, the manufacturers offered to return home with a determination to reduce as far as possible the size of their unit packages.

In the manufacturers' meeting there was some discussion of the standing of manufacturers' selling agents, for whom associate memberships were suggested. Action was deferred to the fall meeting.

Canadian import regulations were discussed and it was brought out that beginning Oct. 1 next, all imports into the Dominion must be marked with the country of origin, else a 10 per cent penalty will be charged and marking enforced after that. Violations may be punished by fine or imprisonment. Regarding defective goods returned by Canadian jobbers to American manufacturers, the

recommendation was made that each manufacturer handle the reimport adjustment individually with the jobber.

In the jobbers' divisional meeting there developed a strong sentiment in favor of jobbers in their home territories getting together frequently to talk over co-operative activities. There was little sentiment for reducing wages, most of the jobbers favoring harder working organizations spurred by compensation standards that have prevailed since the armistice. The jobbers don't want prizes or gratuities offered their men by manufacturers to push certain lines and they don't think manufacturers' missionary men help business in their territories.

Without discussion the convention favored enactment of a sales tax to take the place of the present excise taxes on business.

Horses, Heat and Other Things

This spring (?) convention of automotive men met on an island where the only means of transportation were "hay burners" and in a temperature that hung meanly around 90 deg. While the shirt-sleeved delegates frankly perspired in the meeting hall and the wives of many of them did the same thing a little more delicately on the front veranda, it was consoling to know that nobody would have suffered had it been cold. The contract with the Grand Hotel called for "steam heat morning and evening if necessary." The party got its equivalent in good measure but it didn't cost anybody anything except discomfort, which prompted a good deal of complaining until even that got to be too much of an effort. There is some scenery on the island but you see it, if you insist on looking ahead, over horses' ears. One equine chauffeur said the roads were too steep and another too narrow for automobiles and nobody could contradict them because the regulations of the Mackinac Island State Park—that's what it is—prohibit the use of motor vehicles.

So the automotive men played golf and swam and danced and cussed the weather and forgot all about automobiles, except during the convention and some lapses in porch conversations.

Coming Meetings

The convention will hold its annual meeting and business exhibit the week of Nov. 12 in Chicago. An innovation will be a requirement, enforced by the coupon process which compensates delegates for attending meetings, that both manufacturer and jobber delegates spend (the same) two hours a day on the floor of the exhibit. This is expected to result in more satisfactory contact between exhibitors and jobber prospects than has prevailed at previous shows.

With Colorado Springs approved as next spring's meeting place it is probable that the convention will go to the Broadmoor Hotel and the date is likely to be in June.

The Delegates

Delegates and alternates at the meeting represented 99 jobber and 133 man-

ufacturer members. The total attendance, including guests and families of the delegates, was more than 4000.

The companies represented, with the delegates, and in some cases, delegate and alternate of each, were:

Jobbers

A

Alexander-Seewald Co., Atlanta, W. D. Alexander,
American Motor Equipment Co., Boston, Wallace G. Page.
Auto Equipment Co., Denver, S. T. McCollum.
Auto Supply Co., Hutchinson, Kan., A. J. Jackson.
Automobile Supply Co., Chicago, T. M. Brooks, O. J. Roskoph.
Ayers Farmer Auto Supply Co., St. Joseph, Mich., W. J. Ayers.

B

G. Norman Baughman Co., Tampa, Fla., S. S. Bailey, S. K. Wallace.
Beck & Corbitt Iron Co., St. Louis, J. S. McGanley, George H. Niekamp.
Berrodin Rubber Co., Philadelphia, F. X. Berrodin.
Bonniwell, Calvin Iron Co., Kansas City, Henry C. Calvin.
Borderland Auto Supply Co., El Paso, Tex., B. C. Clements.
Bowman Gould Co., Detroit, L. C. Gould.
Butts & Ordway Co., Boston, F. Marsena Butts.

C

Cahall Motor Supply Co., Philadelphia, R. J. Cahall.
Campbell Auto Supply Co., St. Louis, Fred Campbell.
Carolinas Auto Supply Co., Charlotte, N. C., Joseph G. Fitzsimmons.
Cedar Rapids Pump Co., Cedar Rapids, Ia., C. H. Shuptrine.
Chicago Auto Equipment Co., Chicago, H. M. Behan.
W. E. Cody Co., Columbus, O., W. E. Cody.
E. B. Collins Co., Danville, Ill., E. B. Collins.
Cutten & Foster, Toronto, Ont., W. L. Moncur.

D

Davis-Brown Electric Co., Ithaca, N. Y., O. L. Condit.
Denver Auto Goods Co., Denver, F. A. Smith.
Dine-DeWees Co., Canton, O., Howard M. Dine.
Downing Electrical Co., Des Moines, H. C. Downing.

E

Economy Auto Supply Co., Newark, N. J., Bernard Miller.
Electric Appliance Co., Chicago, R. S. Mitten.
Electric Appliance Co., New Orleans, Mac F. Sterrett, C. Robert Churchill.

F

Faeth Co., Kansas City, Gilbert E. Faeth.
L. Frank Saddlery Co., San Antonio, Tex., R. E. Simpson.
Front Market Motor Supply Co., Harrisburg, Pa., Troy B. Wildermuth, L. K. Wildermuth.
Frain-Slaymaker Hardware Co., Lancaster, Pa., W. H. Smith.

G

Gaul, Derr & Shearer Co., Philadelphia, F. P. Gaul.
General Auto Supply Co., Colorado Springs, Horace Gooch.
General Sales Co., Detroit, Nelson J. Clark.
J. D. Grant Co., Fargo, N. D., J. D. Grant.
Ludger Gravel, et Fils, Montreal, Ludger Gravel.



1921 MACKINAC WITH CALIFORNIA TOP

It is said that somebody had an automobile once on the island where the A. E. A. held its convention, but it frightened the horses. At any rate self-propelled vehicles are a la Volstead and the automotive men had a diversion in listening to the "giddap" of their boyhood days instead of the whir of a self-starter.

C. W. Greene Co., Tampa, Fla., C. W. Greene.
Griswold-Sohl Co., Columbus, O., Curtis Sohl.

\$17,000 for Pueblo Jobber Wiped Out in Flood

THE A. E. A. convention showed its human side by raising, in about half an hour, a little more than \$10,000 to assist the Motor Accessory & Tire Co. of Pueblo, Colo., to get on its feet following a total loss of its stock in the great flood of a few weeks ago.

The supply company, headed by A. V. Faegerstrom, had approximately \$25,000 worth of stock on hand when the waters of the Arkansas River swept its building. The A. E. A. headquarters sent out an appeal in his behalf shortly afterward and about \$7,000 in cash and merchandise was donated to assist him, in addition to several cancellations of indebtedness on destroyed goods and extensions of credits on new goods made by several manufacturers.

Led by Vice-President Dine, manufacturer and jobber members pledged more than \$9,000 in cash and merchandise at the Mackinac meeting and then dropped \$746 in bills in a basket, sending the total well beyond \$10,000. A telegram was sent to Faegerstrom assuring him that the funds were expressions of good fellowship and gratitude on the part of the donors that they had escaped a similar calamity.

It was announced that the Southern Automotive Equipment Association, which met recently in Tennessee, had sent a substantial good will gift to Faegerstrom. . . .

Philip Gross Hardware & Supply Co., Milwaukee, C. H. Mueller.

H

Hippee States Co., Des Moines, O. W. Hail.
Hyslop Bros., Ltd., Toronto, A. M. Botcher.

I

Interstate Electric Co., New Orleans, Percival I. Stern.

J

Johnson Tire & Auto Co., Montgomery, Ala., A. H. Johnson.
Johnson Bros., Auto Supply Co., Wichita, Kans., V. L. Johnson.
Johnstown Automobile Co., Johnstown, Pa., George L. Brown.
Justus & Parker Co., Columbus, O., Charles E. Justus.

K

Kansas City Automobile Supply Co., Kansas City, G. N. Lockridge.
Keyes Supply Co., Ltd., Ottawa, C. G. Keyes.
E. D. Kimball & Co., Chicago, W. S. Martel.
Kimball-Upson Co., Sacramento, L. S. Upson.
Korsmeyer Co., Lincoln, Neb., A. H. Powell.

L

Lamontagne, Ltd., Montreal, P. E. Joubert.
Lomonte & Co., Fort Wayne, Ind., C. J. Lomonte.
Louisville Auto Supply Co., Louisville, Ky., A. L. Terry.
Lowe Motor Supplies Co., New York, Joseph N. Lowe.

M

M. & M. Co., Cleveland, C. V. Brown.
Master Sales Co., Omaha, Max Miller.
McCauley-Ward Co., Waco, Tex., J. L. Ward.
C. S. Mersick & Co., New Haven, L. H. Woodruff.
Mid-West Auto Supply Co., Dubuque, C. J. Timmerman.
John Millen & Son, Ltd., Montreal, J. Ernest Millen.
Motor Car Supply Co., Ltd., Calgary, Can., L. A. Kavanaugh.
Motor Car Supply Co., Chicago, Henry Wilhelm.
Motor Mercantile Co., Salt Lake City, A. D. McMullen.
Manhattan Electrical Supply Co., New York, K. S. Byrd.

N

Nicols, Dean & Gregg, St. Paul, Sidney B. Dean.
Thomas J. Northway, Rochester, N. Y., C. H. Oger.

O

Orr Iron Co., Evansville, Ind., W. A. White.

P

Peaslee-Gaulbert Co., Louisville, Ky., T. M. Williams.
Pennsylvania Rubber & Supply Co., Cleveland, E. R. Seager.
A. J. Picard & Co., New York, R. A. Picard.
Post & Lester Co., Hartford, Conn., C. B. Lamb.

Q

Quinn-McGill Motor Supply Co., Denver, J. D. Quinn.

R

James S. Remick Co., Sacramento, Cal., J. W. Haley.
Repass Automobile Co., Waterloo, Ia., C. A. Clark.
Reynolds & Reynolds, Tacoma, Wash., E. C. Reynolds.
H. C. Roberts Electric Supply Co., Philadelphia, H. J. McConnell.
Robinson Bros. & Co., Louisville, Ky., Lyman L. Dawson.
Roper, Harris & Dunn Co., Greenville, Tex., A. M. Roper, O. R. Dunn.

S

Sheridan Auto Supply Co., Chicago, H. V. Jones.
 Severin Tire & Supply Co., Oklahoma City, Okla., A. L. Severin.
 Shadbolt & Boyd Iron Co., Milwaukee, F. Ham. Suter.
 Shattuck-George Co., Wichita, W. R. George.
 Sieg Co., Davenport, Ia., R. R. Englehart.
 C. J. Smith & Co., St. Paul, K. A. Relf.
 G. Somers & Co., St. Paul, A. W. Logan.
 Southwick Auto Supply Co., Topeka, Kan., F. S. Southwick.
 Strauss Co., St. Louis, M. F. Beaming.
 B. K. Sweeney Electric Co., Denver, Thomas H. Bodfish.

T

Talman Auto Supply Co., Richmond, Va., N. E. Pate.
 E. L. Taylor Co., Richmond, Va., M. L. Rice.
 Tisch Auto Supply Co., Grand Rapids, Mich., E. E. Fehsenfeld, R. J. Rybold.
 Toledo Rubber Co., Toledo, E. C. Dear-dorff.

U

Universal Auto Supply Co., Chicago, F. J. Brichasek.

W

Washington Auto Supply Co., Washington, Ill., George Rinkenberger.
 Western Motor Supply Co., Minneapolis, Charles J. Parker.
 Williams Hardware Co., Minneapolis, L. H. Williams, L. R. Upham.
 York Supply Co., Greenville, O., C. H. York.

Manufacturers

A

Advance Automobile Accessories Corp., Chicago, W. A. Richards, R. M. Sheridan.
 Albertson & Co., Sioux City, Ia., H. A. Jacobsen.
 Allen Auto Specialty Co., R. A. Crooker.
 Alvord Reamer & Tool Co., Millersburg, Pa., D. H. Hollowell.
 American Bureau of Engineering, Chicago, H. Edsall Olson.
 American Chain Co., Bridgeport, Conn., W. T. Morris, F. E. Sparks.
 American Eveready Works, Long Island City, N. Y., C. E. Anderson.
 American Hammered Piston Ring Co., Baltimore, Walter P. Coghlan, T. B. Black-iston.
 Anderson Co., South Bend, Ind., John W. Anderson.
 Anderson Electric & Equipment Co., Chicago, B. J. Grigsby.
 Apex Electric Mfg. Co., Chicago, K. C. Johnson.
 Atwater-Kent Mfg. Co., Philadelphia, V. W. Colamore.
 Au-To Compressor Co., Wilmington, O., R. O'Keefe.
 American Grinder Mfg. Co., Milwaukee, C. N. Jonas.
 Automatic Safety Tire Valve Corp., New York, Socrates X. Newman.
 Adams & Etting Co., Chicago, John H. Boyle.

B

Badger Mfg. Corp., Milwaukee, Charles H. Hathaway.
 Black & Decker Mfg. Co., Baltimore, R. W. Proctor.
 Bonney Forge & Tool Works, Allentown, Pa., James G. Geagan.
 Brunner Mfg. Co., Utica, George L. Brunner, J. H. Mehan.
 Burd High Compression Ring Co., Rock-ford, Ill., O. P. Hand.
 Barcalo Mfg. Co., Buffalo, B. M. Moore.
 Bridgeport Brass Co., Bridgeport, Conn., V. Haight, Jr.
 Bowen Products Corp., Auburn, N. Y., L. A. Austin.

C

Canadian Lamp & Stamping Co., Ford City, Ont., E. A. Souller.
 Central Brass & Fixture Co., Springfield, O., A. O. Dennis.
 Champion Ignition Co., Flint, Mich., W. S. Isherwood.
 Champion Spark Plug Co., Windsor, Ont., A. J. Hayes.

New Members of the A. E. A.

JOBBERS

Onondaga Auto Supply Co., Syra-cuse, N. Y.
 Philectric Co., Cleveland.
 California Auto Supply Co., Stock-ton, Cal.

MANUFACTURERS

Biflex Products Co., Waukegan, Ill.
 Cincinnati Screw Co., Cincinnati.
 Moon Bros. Mfg. Co., St. Louis.
 Phoenix Mfg. Co., Eau Claire, Wis.

RESIGNATIONS

J. Rickard Co., Schenectady, N. Y.
 General Tire & Rubber Co., Akron, O.
 Dayton Wire Wheel Co., Dayton, O.
 Lockwood - Asch Co., Jackson, Mich.

Champion Spark Plug Co., Toledo, Robert A. Stranahan, F. B. Caswell.
 Coe-Stapley Mfg. Co., West Haven, Conn., H. Paul Hall, E. W. Kronbach.
 Columbus Varnish Co., Columbus, O., S. W. Hanna, W. S. Hanna.
 Conant & Donelson Co., Conway, Mass., A. E. Chadwick.
 Connecticut Telephone & Electric Co., Meriden, Conn., C. E. Stahl.
 Cooper Mfg. Co., Marshalltown, Ia., H. M. Cooper.
 Corcoran Mfg. Co., Cincinnati, W. R. Hughes, Martin Murray.

More Convention Pictures

Additional pictures of people and events at the Mackinac Island convention will be printed in next week's Motor World.

Corcoran-Victor Co., Cincinnati, James A. Muir, Ward Earley.
 Crescent Tool Co., Jamestown, N. Y., C. R. Swisshelm.
 Canedy-Otto Mfg. Co., Chicago Heights, Ill., L. Z. McKee.
 Cincinnati Ball Crank Co., Cincinnati, V. A. Davison.

D

Dole Valve Co., Chicago, Oscar Margolles.
 W. M. Dutton & Sons Co., Hastings, Neb., R. J. Myers.

E

E. A. Laboratories, Inc., Brooklyn, N. Y., William Von Elm.
 E. Edelman & Co., Chicago, E. Edelman.
 R. G. Edgecombe Co., Ltd., London, Ont., G. T. Edgecombe.
 Edison Lamp Works of General Electric Co., Harrison, N. J., C. P. Metzger.

F

Federal Brass Works, Chicago, A. A. Bernartz.
 Federal Miniature Lamp Works, Chicago, H. L. Laidley, Otto T. Stuefer.
 Federal Rubber Co., Cudahy, Wis., H. A. Davey.
 Fulton Co., Milwaukee, S. A. Fulton.
 Gates Rubber Co., Denver, J. H. Crary.
 Gemco Mfg. Co., Milwaukee, Grant F. Disher.
 General Asbestos & Rubber Co., Charles-ton, S. C., J. H. Bricker, H. L. Parmenter.
 Grant Grip Mfg. Co., Oshkosh, Wis., Otto Kaufman.
 Gill Mfg. Co., Chicago, E. P. Chalfant, E. J. Smith.
 L. H. Gilmer Co., Philadelphia, Jay E. Chilson.
 Globe Machine & Stamping Co., Cleveland, William F. Edwards, D. S. Michelsen.
 Goodrich, Lenhart Mfg. Co., Hamburg, Pa., A. S. Lenhart.
 Graton & Knight Mfg. Co., Worcester, Mass., G. A. Barnard, 2nd.

H

L. P. Halladay Co., Streator, Ill., L. P. Halladay, W. J. Heinicke.
 Hall-Thompson Co., Hartford, Conn., F. J. Murray.
 Harvey Spring & Forging Co., Racine, Wis., T. H. Van Horn.
 Hill Pump Valve Co., Chicago, Nathaniel Leverone.
 Hill-Smith Metal Goods Co., Boston, D. J. Barrill.
 Howe Lamp & Mfg. Co., Chicago, B. G. Cochran.
 Hastings Mfg. Co., Hastings, Mich., A. E. Johnson.

I

Imperial Brass Mfg. Co., Chicago, James T. Greenlee.
 Indiana Lamp Co., Connersville, Ind., Fred W. Kohl.
 J. & B. Mfg. Co., Pittsfield, Mass., G. H. Southard, Jr.
 Jefferson Electric Mfg. Co., Chicago, A. R. Johnson.
 H. W. Johns-Manville Co., New York, E. E. Arnold, J. W. Perry.
 Judd & Leland Mfg. Co., Clifton Springs, N. Y., Z. H. Haney.
 William R. Johnston Mfg. Co., Chicago, William R. Johnston.
 C. J. Johnson & Son, Racine, Wis., C. A. Armstrong.

K

K-W Ignition Co., Cleveland, C. Albracht, A. Edmund Hanson.
 Klaxon Co., Newark, N. J., R. L. Wil-kinson.

L

Laminated Shim Co., New York, F. A. Cole.
 F. H. Lawson Co., Cincinnati, J. Arthur Burr, H. L. Jilson.
 Las-Stick Patch Co., Hamilton, O., H. E. Taylor.

M

Manley Mfg. Co., York, Pa., R. E. Manley.
 McQuay-Norris Mfg. Co., St. Louis, L. A. Safford.
 Metal Specialties Mfg. Co., Chicago, L. W. Golder, N. H. Oliver.
 Metal Stamping Co., Long Island City, N. Y., John F. Galvin.
 Monroe Auto Equipment Mfg. Co., Monroe, Mich., J. W. Fischer.
 Frank Mossberg Co., Attleboro, Mass., E. W. Scott.

Moto-Meter Co., Inc., Long Island City, N. Y., E. V. Hennecke, Samuel E. Ryder.
Motor Specialties Co., Waltham, Mass., L. R. Bresler.
Multibestos Co., Walpole, Mass., J. C. Donnelly.
McQuay-Norris Banfield Co., Toronto, Edwin J. Banfield.

N
National Lamp Works, Cleveland, A. J. Grimm.

National Standard Co., Niles, Mich., R. W. Smith.

A. Nelson Mfg. Co., Chicago, B. H. Lancaster.

Neville Steering Wheel & Mfg. Co., Detroit, J. A. Palmer, I. C. Volbrecht.

New Era Springs & Specialty Co., Grand Rapids, Mich., Smalley Daniels.

Northwestern Chemical Co., Marletta, O., Fred R. Hall, R. M. Tussing.

Nu-Bac Mfg. Co., St. Louis, E. V. Wilkinson, Adam Weist.

No-Leak-O Piston Ring Co., Baltimore, J. E. Norwood.

P
Polson Rubber Co., Cleveland, H. B. Polson.

Prescott Auto Parts Co., Webster, Mass., J. Prescott.

Presto-Felt Co., Chicago, A. L. McLeod.

Pyrene Mfg. Co., New York, Walter Bauer.

N. A. Petry Co., Philadelphia, N. A. Petry

Protexal Co., Abingdon, Ill., B. D. Adams.

R
Raybestos Co., Bridgeport, Conn., H. C. Dishman.

Romort Mfg. Co., Oakfield, Wis., L. P. Zinke.

Russell Mfg. Co., Middletown, Conn., L. J. Milley.

Frank Rose Mfg. Co., Hastings, Neb., D. D. Duncan.

Rees Mfg. Co., Pittsburgh, William H. Newbaker, V. T. Salter.

S
C. A. Shaler Co., Waupun, Wis., R. B. Dunlap, R. E. Malone.

Splitdorf Electrical Mfg. Co., Newark, N. J., C. M. Bunnell, A. A. Crumley.

Sterling Mfg. Co., Cleveland, W. M. Scott.

Stewart Mfg. Co., Oakland, Calif., James A. Stewart.

F. W. Stewart Mfg. Corp., Chicago, F. W. Stewart.

Stiles Mfg. Co., St. Louis, J. C. Stiles.

Star Inlaid Machine Works, St. Louis, John F. Shuford.

Spencer-Smith Machine Co., Howell, Mich., A. W. Lines.

Standley Skid Chain Co., Boone, Ia., C. R. Standley.

T
Templeton, Kenly & Co., Chicago, C. D. Pettingill.

Thermoid Rubber Co., Trenton, A. E. Barlow

Charles O. Ting'ley & Co., Rahway, N. J., William McCollum.

Tuthill Spring Co., Chicago, D. S. Campbell.

Trexler Co., Philadelphia, E. J. Flannery.

Trico Products Corp., Buffalo, Paul M. Vogel, John R. Osher.

V
Van Cleef Bros., Chicago, Noah Van Cleef.

Victor Mfg. & Gasket Co., Chicago, C. C. Secrist.

Vogt Mfg. Corp., Rochester, L. S. Foulkes, Jr.

W
Walker Mfg. Co., Racine, Wis., W. T. Walker.

Warner-Patterson Co., Chicago, H. E. Patterson.

Weaver Mfg. Co., Springfield, Ill., Charles F. Hodgson.

E. A. Whitehouse Mfg. Co., Newark, N. J., W. S. Holmes.

Westinghouse Lamp Co., New York, Leon S. Paletton.

Western Vulcanizer Mfg. Co., Chicago, F. James Forbes.

Western Radiator Corp., Chicago, C. R. Thomas.

X Laboratories, New York, A. D. Williams, E. R. Tolfard.

"Our Banker Has Been Good to Us"

IN a small New England city there is an automotive repairman who has progressed within the past two years from a stage of comparative poverty to one in which his business is earning a nice revenue for himself and paying good wages to a staff of five men.

This man, talking the other day about his business affairs, made this interesting remark: "Our banker certainly has been good to us."

In these days when so much has been said about the reluctance of bankers to finance automotive businesses, the repairman's statement was interesting. He was asked for details and in response told the story of his relations with the cashier of a bank which two years ago loaned him \$200 and gradually has increased its support until recently it financed his purchase of a building in which he has a number of tenants who virtually carry the entire expense of its maintenance, leaving the repairman rent free.

"Our banker certainly has been good to us," said the repairman, but when his story was investigated it was seen that he was also good to the banker. His banking affairs, small as they were, were conducted on a business basis, with the result that he won not only the banker's interest but his confidence and was able to utilize bank assistance to build his business up to its present state of prosperity. A few months after this repairman bought his business from a predecessor he found himself hard pressed for ready cash and went to the cashier of a local bank for a loan. He asked for \$800 and finally got \$400 when he had convinced the banker that he was thoroughly familiar with the business he was trying

to conduct, having put in several years in the same line of work as an employee. On the strength of stock and equipment in the establishment and prospective business, the banker loaned him \$400 to be paid back in eight months—\$50 a month.

The repairman paid it back but in four months instead of eight—\$100 a month.

This action of the repairman in doing more than his contract with the bank required him to do won the confidence of the cashier and made the latter the repairman's friend.

A few months later, as the business began to grow, the repairman's wife, who was working with him as book-keeper, suggested she would like to use some of the profits for the purchase of a phonograph and furniture for their home. There was money enough in the bank to do this but the repairman demurred, pointing out that it would cut down their deposits almost to nothing and "probably would not make much of a hit with the banker."

The repairman, though he was not experienced in financing, realized that one of his assets at the bank was his deposit, the size of which from week to week was bound to have considerable to do with the formation of the banker's opinion of him as a business man. So he and his wife bought no talking machine nor furniture at that time but kept the bank balance up to a reasonable figure and retained the respect and friendship of the banker.

The wisdom of this action was demonstrated a little later when the repairman found himself pressed by the local electric power company to pay bills for electric power. The bill ran up to sev-

eral hundred dollars owing to use of power for testing electrical equipment. The electric company became insistent on immediate payment. The repairman offered to discharge the debt a little at a time, but the power company was not satisfied. Finally the repairman suggested that the collector for the power company go around and see the banker. What the banker told the power company representative the repairman never knew, but he was not further pressed for immediate payment of the electric bill and was able to discharge it in installments without crippling his working capital.

Recently the repairman had an opportunity to purchase the building in which his business was located. This building housed not only the repairman's establishment, but several other small shops. The repairman told his opportunity to the banker and the latter financed the purchase of the building, taking over mortgages covering the greater part of the purchase price. Rentals enable the repairman to carry the interest and gradual payments on the principal of his investment and also insurance, taxes and other charges, and the repair business itself goes practically rent free.

Throughout the entire period of his business acquaintance with the banker, the repairman has been able, whenever necessary, to make short loans for sufficient sums to cover bulk purchases of stock.

He has played fair with the banker and the banker has played fair with him, to the mutual advantage of both. No wonder this repairman says: "Our banker has been mighty good to us."

What It Means to Sell the RIGHT TRUCK

And How to Do It

By HAL T. BOULDEN

Vice-President and Sales Director, Selden Truck Corp.

EFFICIENT truck transportation is the act of obtaining the lowest possible cost per ton or unit mile for the longest period of time from a given truck unit.

Given a motor truck of good design, material and construction it is the duty of the man selling transportation to make an installation that will be of maximum value to the purchaser.

The actual connection between the dealer selling the truck and the manufacturer who produces it is the first step and one of the most essential considerations to selling the right truck for the job. The contract between the dealer and the manufacturer must be one which will not only permit him to make a fair return on his investment, but it is essential that the contract be an incentive for the dealer to build a foundation upon, which will result in repeat business and assure him of permanency in his business. The manufacturing company behind the contract with the dealer must be of stability and have a policy that will assist the distributor who is marketing the trucks to obtain these results.

The importance of this factor, that is, the relation between manufacturer, distributor and owner, is vital.

The next step toward installation is the analysis governing the conditions surrounding the operation of the truck to be used. In this connection it is necessary that the man who is to make the recommendation be familiar with the character of the roads to be traversed, knowing what the grades and surface conditions are, what materials are to be handled and the average distance of the routes. The quantity of material and time of assembly at loading point must be taken into consideration, as well as the rate of assembly at point of load. Thus the average load may be deter-

mined and in the event a special body is necessary an intelligent estimate can be submitted.

After determining the average load, the average distance per trip, the number of stops per trip and the body requirement, the next step is to ascertain the approximate cost of maintenance. In other words, what good garage space may be procured for, the shop facilities of the party responsible for the upkeep of the truck and the quantity of parts this party may have for replacement in the particular job operated.

The dealer's part of this procedure of properly selling the truck is to have shop facilities and quantity of parts for replacement on hand at all times so as to prevent the laying up of the truck in case of accident or after several years of operation, the wearing out of the working parts of the truck as a whole.

If the person recommending an installation in accordance with the analysis of what the truck is to do after it has been put to work, procures the information regarding the character of the roads, the grades and surfaces, the tonnage to be handled, the distance to be traversed, and the stops to be made, together with the time required for loading and unloading, it is then his duty in his calculations to arrive at the actual ability necessary in a motor truck for operation under those conditions, so as to obtain the lowest possible cost per ton or unit.

The proper installation and the placing of the proper truck on any one particular job is the beginning of selling the right truck. After the installation is made, it is essential in order to secure the lowest possible cost per ton or unit mile for the longest period of time, that the seller keep in touch with the user to insure that the truck be maintained at its high-

est point of operating efficiency at all times. The best possible way of doing this is through a regular inspection service, which enables the seller to know at all times that the truck is being properly lubricated, that the different wearable parts are not allowed to wear beyond their limitations by excessive overloading and abuse, without being replaced, and at the same time enables the owner to know at all times the exact condition of his equipment and be advised as to the cause of any expenditures to be made to reduce or keep his operating costs at a minimum.

When the purchaser of motor truck equipment realizes that the dealer from whom he buys is to be in that business permanently, he quickly realizes that he is not being sold so much material built into a motor truck at a first cost purchase price. When service and interest in his purchase, such as can only be given through regular specific inspection, is extended to him, together with a prescribed system for him to tabulate and keep account of operating costs with the idea in view that these figures may be used from time to time in comparison to determine that his truck is delivering for him at the lowest possible cost per ton or unit mile, he appreciates he is being sold motor truck transportation rather than motor truck buying.

Having done this, you have started building a relationship with the truck buyer which will give you the inside track when the time comes for replacement of the truck or purchase of additional units. This means paving the way for that most profitable of all orders—the repeat order.

In other words, sell the user the operation of the truck from the time it is put to work to perform its activities, rather than to take his order, receive his payment and forget him.



The Cat Was Wrong

By RAY W. SHERMAN



JUST a few days before, Reilly, in a moment of hot-weather aberration, had almost upset Tommy Trumbull for the summer, and the business of selling Sennett cars in and about Callawassa never knew how close it had come to a severe upheaval.

It all happened when Reilly, with big drops running down into his eyebrows, had read to Tommy a poem which, as Tommy remembered, Reilly claimed to have been written by a black cat. It was a rambling, jingling, foolish sort of poem, which lacked spine and purpose, and its aimless jingling left one with the impression that maybe work was a bad thing after all and the ultimate of every man should be a minimum of work and not too much worry about results.

From the poem Reilly had deduced a philosophy of the latency of energy, and on a hot afternoon he had harangued Tommy nearly into a complete cessation of activity. And ever since then the jingle had run through Tommy's head until it threatened to drive from his thought factory all worth while and essential production.

Every time Tommy tried to think the black cat's mad message would begin its jingling. In the midst of a mass of mail Tommy blurted out to Reilly:

"Say! Do you remember that fool poem about the black cat—or that you said the black cat wrote?"

"Yes," Reilly laughed. "Why?"

"The darned thing keeps running through my head and I can't get it out. Every time I try to do anything that crazy everything and anything and everywhere and anywhere keeps running through my noodle like a lot of used cars in a speedway race."

Reilly laughed.

"And, you know," Tommy hitthd forward in his chair. "I've thought a lot about that latency of energy business you were talking about—when it was too hot for me to give you an argument, and I've come to the conclusion that the cat was wrong—provided the cat really wrote the poem."

Reilly laughed again.

"You don't know how much the things

you said that day have made me think. At first I thought there might be a lot in the theory of the latency of energy, and that if we work too hard we don't work efficiently. I wondered if I was working too hard, or if our organization was working too hard, and I've come to the conclusion that there aren't many people in the world who ARE working too hard. Some of them may THINK they are, but I have my doubts.

"You know," said Tommy, "I'm convinced that most of the people who work haven't any idea how much more they could really do without putting in any more hours or using up much more energy. Too many of us figure that if we've been fairly busy all day we've done a good day's work, and a lot of us haven't done much except make a pretense of being busy during business hours."

"That's a broad charge," Reilly contended.

"I know it is," Tommy answered, "but it's a lot like what Sims and Harvey said in England; there's some truth in it if you'll weigh the statement carefully and not let your first impression becloud your mind. Take, for example, a salesman in our organization. He puts in about eight hours a day. Some of the salesmen come in in the morning and spend half an hour getting ready to begin. Then he may go out and make some calls. Not all of them try to co-operate in the efficient planning of their calls so they won't be using more time than is necessary getting from place to place. Not all of them have a proper regard for the use that might be made of the eight business hours they put in. Few of them try to crowd one more bit of sales work into the eight hours. They work at twenty-two miles an hour when they could just as well work at twenty-five."

"Take a salesman on the floor. When there are no prospects on the floor he is quite likely, from force of habit, to let the spare time go to waste, instead of using it to improve himself as a salesman. It is his habit to talk to prospects and it doesn't occur to him to do anything else during his hours of floor duty.

But if he would crowd in an hour a day of study of cars and salesmanship and how to make progress in business just see how far he might advance himself.

"Take a shop foreman. His habit is to run the shop and turn out work. He knows that there are complaints on the part of customers and he SHOULD know that the customer is the source of the payroll. But he spends his day running the shop as a shop and does not to a sufficient extent dig into the proposition and see how well he could run the shop as a source of customer satisfaction. He doesn't let himself out an extra mile or two and do a bit more than is expected of him.

"Take you and me. We all have these same habits of work, the habits of doing certain things during business hours. We're quite likely to do the same kind of things over and over and over again, without analyzing our movements and endeavoring to determine how we can improve. If we have a few spare moments we let them slip, not realizing that we aren't generally overworked even if we work at fair speed for eight hours a day.

Take a factory manager or president. The cars may be coming through, the dealers may be taking them, the profits may be showing up well, and everything may be all cat-shape so far as he can see, so he doesn't consider how much more he could do without hurting himself. He MIGHT spend more time studying the business, the cars, the dealer organization and ever so many other things to provide plans for the day when competition may make different products and different methods necessary.

"You can take the whole human race and check it over on this basis and I think you'll find that most of us have too much latent energy instead of not enough. We don't dig hard enough to find out just how much more useful work we can do. Of course, some folks are highly efficient—and a lot of us aren't. And—"

"You're right," Reilly declared.

"And," Tommy resumed, "that fool black cat was wrong and I'm going to lick him if I have to do it all alone."

"I'll help you," laughed Reilly.



Dollar Ideas

Earn a Dollar

MOTOR WORLD will pay \$1 each for ideas for this department. The ideas should have to do with sales and business management. The idea should be in two parts:

- 1—The problem.
- 2—The solution.

But if you'll get the idea on paper in any fashion whatsoever, we shall be glad to shape it up for you. Do two things:

- 1—Help some other man.
- 2—Make a dollar for yourself.

What Does Your Prospect Get for Reading Your Sales Letter?

YOU may answer that he gets an opportunity to know something about the merchandise you are offering for sale which may enable him to meet a certain personal or business need. But suppose he does not want any of your merchandise?

With this supposition in mind, or at least with the thought that the average person unknown to him and receiving a letter might feel he was not interested in motor cars and trucks and so would fail to read the letter, the Richmond Garage of Port Richmond, Staten Island, owned by Einziger Bros., recently sent out a check for three cents with each letter announcing its ability to serve the public in the sale and service of Willys-Knight, Overland and Paige cars and White trucks. Einziger Bros. assumed arbitrarily that the people whom they would address valued their time at \$8,000 a year and on this basis figured out that the reading of the letter would consume three cents of their time. Accordingly, checks for this amount accompanied the letters, creating what might be termed a mild sensation in the community and getting for Einziger Bros. a lot of favorable publicity.

Since the check idea was tried out, the Richmond Garage has been flooded with letters commenting on it. One man cashed the check and then sent back an

itemized bill for 12 cents, being additional amount demanded for the time required to read the letter. Many of the checks were cashed in various banks and through the signatures Einziger Bros. obtained a number of prospects.

Some of the recipients of checks returned them. This has given Einziger Bros. the idea of calling in all checks not already cashed and dividing the money between the two local hospitals. The "three cent" letter follows:

Assuming your time to be worth \$8,000 a year, we are enclosing our check for three cents in payment of the few moments it will take you to read this letter.

Suppose that you were ill—you would most certainly go to the best specialist in the land to diagnose your case. Wouldn't you? And, when you had consulted him, you would feel quite confident that you had been set right and were all prepared to follow out his advice to the letter.

We, too, are specialists but differ from the doctor in that we are specialists on automobiles of the right kind and also that we are willing to give you our advice gratis. We are ready to diagnose your "case" for you and are confident that we can set you on the right road in the line of automobiles.

Are you well acquainted with the various good automobiles on the market? The power and performance of the PAIGE car, for example, are matters that have become history. Yet, wonderful as the PAIGE car is, your requirements may happen to make another car desirable. For a low-priced car the OVERLAND should appeal to you, because of its combination of maximum economy and service. The WILLYS-

KNIGHT makes its strongest appeal to many people because of its unfailing performance day in and day out; it is a moderate priced car that gives enduring satisfaction. Furthermore, we handle the WHITE TRUCK, owners' records of which show it to be the most economical, dependable and durable truck on the market.

We have our showrooms at the above address, where we shall be more than pleased to talk matters over with you—and, incidentally, cash the enclosed check. A phone call or card will bring our representative.

Very truly yours,

EINZIGER BROS.

A Trip to the Stockroom Helps Sell Cars

A TRIP through the stockroom in the basement of the Studebaker salesroom in Cleveland is one of many selling appeals that the company makes on prospects.

W. F. Schwemler, credit manager and cashier of the company, cited the trip to show that the little things in the selling game when observed can cut quite a figure in making an appeal that sells cars.

The Studebaker concern is proud of its stock department, and it is operated on the theory that a well rounded establishment, with everything in order and with everything on hand to take care of all emergencies that might arise, carries quite an appeal to a prospect. So when the prospect is still interested in the car and has shown no signs of weariness with the sales talk that is being administered, the salesman suggests a trip to the stock department.

"Here you will see how well we will be able to supply your wants when you buy our car," says the salesman. "The automobile is about the safest and strongest vehicle that can be found, but human agencies cannot control emergencies. This department enables us to give with each car the guarantee that the vehicle will never have to be laid up on account of the owner's inability to get a part or appliance from this agency."

Then the bins are inspected, and woe be to the man in the stockroom who

<i>Overland</i>	RICHMOND GARAGE	<i>Willys</i>
	EINZIGER BROTHERS	
	AUTOMOBILE DISTRIBUTORS	
	159-163 RICHMOND AVENUE	
		No. 1593
	PORT RICHMOND, N. Y., JUNE 15, 1921	
PAY TO THE ORDER OF	<i>Motor World</i>	\$ <u>3</u> / 100
	THREE CENTS	
TO THE	<i>Einziger Bros.</i>	
PORT RICHMOND NATIONAL BANK		
1-452	PORT RICHMOND, N. Y.	

This three-cent check won a lot of attention and obtained prospects for a Staten Island dealer

permits the stock in any of the bins to get low. The customer after this inspection is shown the precautions that are taken to prevent the supplies of parts becoming exhausted. Every man in the stockroom has a section to look after. Every morning report cards as to the state of the supply are placed on the desk of the purchasing agent. These report the sales made and the balance on hand. This is explained to the prospect, and the explanation offered that it is done for the good of the service that the company gives each owner.

Schwemler says that his company has built up a good will for its stock and service department that is of inestimable value. Patrons lean upon it; tell others about it and this sends in new prospects. An evidence of what the stock department may mean to the good will maintained by an establishment was given as follows: An owner of a Studebaker car purchased in Cleveland had an accident while he was visiting in Florida. He was near several cities where well equipped garages could be found. His first thought was of the stockroom of the agency in Cleveland. He had called on it for help in the past and had been impressed with the results. So he telephoned the Cleveland agency from Florida, ordered what he wanted; waited for it to come; had the repairs made and felt fine, for he came into the office after his return and thanked the management for the prompt service. That man has turned in several prospects to the company, who have purchased cars.

"Every man has friends and he likes to do favors for them," says Schwemler. "We try to make our car owners feel that they can do a favor for a friend in the market for a car by buying from us."

Another feature of this company's selling appeal is a standing invitation that

is given its patrons to call and tell their troubles. If there is a legal complication about the car, advice is given. Information about roads, traffic ordinances, the use of oils, lubrication and every possible quandary that the new car owner can get into, is given.

A Tie-Up with National Advertising

ANOTHER effective display by the Reo Motor Car Co., Lansing, was a giant

replica of full page *Saturday Evening Post* advertisement devoted to this particular make of automobile. Instead of the car being pictured in the ad, a real car was employed. This "full-page ad" stood from floor to ceiling and was in correct proportion. The car actually burst through the orange panel from the rear and stood out against the background in bold relief. A luxurious Oriental carpet was draped across the floor from where the ad exhibit was placed, to the front of the window.

Maybe There's a Hotel in Your Town That Would Be Interested



Two of these buses "de luxe," believed to be the most expensive and luxurious in service in the United States, have just been put in operation in Chicago by the Edgewater Beach Hotel. They are used to transport passengers between the hotel and the shopping districts. These particular jobs are of special design with illumination for night reading and comfortable top deck accommodation. They are on White chassis

The Accessory Merchandiser

Checking the Windows' Selling Appeal

AN attractive single unit window display, setting forth one product or the products of one maker, may possess ideal unity and harmony, but diversified displays have strong analytical advantages, according to E. M. Thom, Cleveland, accessory dealer, who believes in studying "window shoppers." For example, one week the left section of his 16-foot window contains pure utilities, the middle section semi-utilities, and the right section luxuries. Another week, typical accessories under \$1 are grouped on the left, things from \$1 to \$5 in the center, and items over \$5 on the right. Again, the left side contains old-fashioned articles, the middle modern items, and the right radical or progressive items of similar types. At least one day a week during such groupings, Thom or a clerk, by casual glances, notes the number of passersby stopping before the window, which section they are most interested in, and whether they come in

to buy or inquire. Tabulation of such record lists shows what accessories draw best, and, when exclusive featuring is done, these items are favored.

This Tire Letter Hit the Mark

"LESS tire trouble and repairs, and less tires to buy, is what our tire inspection and test service will do for you," is the opening "bull's-eye" of a very carefully prepared circular letter in imitation typewriting, just mailed out to a goodly list by the Milwaukee Tire & Supply Co., Milwaukee. In the first place, the letter emphasizes "Milwaukee" in every possible way. The mailing list is entirely within the city limits. The company specializes on tires, valves, rims, parts and chains which are well advertised. The letter continued: "We will keep your tires properly inflated, having equipment for furnishing air to tires up to 44 by 10. We will inspect your tires for unusual wear caused by imperfect alignment, and make recommendations which will mean a saving of

time and many dollars to you. Telephone Broadway 4480 and have our man call." H. O. Stenzel, president and manager of the company, reported that this letter, hardly ten lines, narrow space, of typewriting, seemed to impress customers and others as covering exactly their conscious as well as subconscious ideas of what a real tire service should comprehend and attempt to cover and accomplish. The text of the letter was the result of a careful study of comments and inquiries by customers on the subject of tires, over a considerable period.

What the Motor Tourist Needs

THE Dancer-Brogan Co., Lansing, had a window drive on articles necessary for the comfort of the motor tourist. In the window was a group of automobile tires, with blankets artistically draped through them. Scattered in and out of the tires were such articles as thermos bottles, picnic baskets and motor road maps.

Editorial Observation

Accessory Prices

"GOIN' Fishin' This Summer?" asked Motor World a few weeks ago in presenting a cartoon setting forth the opportunity in automotive equipment merchandise. "All you need is a pole and the proper bait," said the article, showing a fisherman with a pole marked "automotive equipment stock" and bait marked "advertising, display and modern merchandising methods," busily pulling in fish marked "profits." One of our readers cut the cartoon out of the paper and mailed it back with the following comment: "And the proper bait is lower prices."

The reader then illustrated a fishing scene with this comment: "High prices, nothing doing; low prices, good sport." This dealer raised a question which has not been largely discussed in the trade, that is, prices of automotive equipment. On a good many lines prices have been materially reduced during the past year and jobbers and dealers have reported some sales stimulation on the reduced lines. In other lines, war time prices still prevail. Probably there are some articles of automotive equipment which will have to be sold perhaps for a long time at prices which have prevailed during the past two or three years; lower prices are not possible in view of material and production profits. In other cases it may be that price reductions would produce increased business sufficient to bring down production costs, thus giving the manufacturer, the jobber and the dealer a larger turnover and giving the public the benefit of lower prices.

With the experience of passenger car manufacturers fresh in mind, it would seem that the automotive equipment industry might well scrutinize closely its selling prices and determine in the case of each individual product whether a reduction, which would undoubtedly have some stimulating effect on business, should be made.

Reimported Trucks

IN the general tariff legislation now being considered in Congress there is an opportunity to induce inclusion of measures to protect the domestic industry and trade against reimportation without duty of American made trucks and accessories being brought here from the former European war zones. The question of protection is now being actively considered by the Senate and House committees in charge of tariff legislation and the motor truck business could do itself a good service by writing to members of these committees, pointing out the damage being done the industry by the competition complained of.

In the New York and Chicago markets particularly, also in other sections, these reimported trucks, purchased by the importers at low prices, are being sold for from 30 to 50 per cent of the list price of domestic vehicles of the same makes.

The importers are arranging for sales representatives in all sections of the country and unless Congress can be induced to place a tariff on these reimported trucks and

accessories, forcing their sale at prices at least approaching the domestic product, there will be continued this artificial sales resistance.

It is becoming more and more apparent that Congress, along with the Administration generally, wants to help business, but it needs information on which to base its assisting action.

Letters from truck dealers and distributors to their Senators and Representatives will do more than anything else to give Congress the right information on this situation.

Mechanics' Wages

THE Cleveland Automobile Manufacturers and Dealers Association has just completed an investigation of service station and garage employees' wages which may prove helpful to individual members in fixing wage scales and also to the trade generally in bringing about stabilized wage conditions.

The investigation revealed the wide divergence in wages paid for specified classes of work. It was found that some employees were underpaid while others were receiving wages which members of the committee declared were not justified by existing conditions. Among first class mechanics it was found that wages ran from \$1.05 down to 50 cents an hour, the largest number of shops paying 85 and the average wage per hour being 80 cents. Among second class mechanics the wage rate ran from 85 down to 50 cents, with an average of 67 cents, and among the third class mechanics from 75 down to 37½ cents, with an average of 55. The highest paid machinists of the first class were receiving 95 cents an hour and the lowest 65, with an average of 77 cents. Equally divergent wages were found to prevail among blacksmiths, electricians, radiator men, metal workers, upholsterers, painters, washers, and porters.

For the information of the trade generally, it may be noted that the Cleveland investigation showed the following wages being paid: Blacksmiths, first class, high 90 cents, low 60 cents, average 75; blacksmiths, second class, high 60, low 50, average 57 cents; electricians, first class, high 83½, low 50, average 80; electricians, second class, high 83½, low 50, average 66; radiator men, first class, high \$1, low 60, average 80; radiator men, second class, high 55, low 50, average 59; metal workers, first class, high 90, low 65, average 79; metal workers, second class, high 75, low 54, average 62; upholsterers, first class, high 90, low 65, average 80; upholsterers, second class, high 80, low 50, average 65; painters, first class, high \$1, low 67½, average, 85; painters, second class, high 75, low 58½, average 68; painters, third class, high 60, low 40, average 52; washers, high 75, low 32, average 54; porters, high \$30 per week, low 32 cents per hour, average wage per hour, 50 cents.

It might be worth while for dealer associations in other cities where wage conditions are more or less chaotic and where there is a desire to get them stabilized to conduct investigations similar to that in Cleveland.

LETTERS *from* READERS

Cashing a Proclamation

Editor Motor World: Ever ring up a proclamation in the cash register? Ever figure you could turn one into coin?

The automobile dealers of Pomona, Cal., recently did this and on short notice at that. Here's how:

Inasmuch as California has a State "Fish Day" because of some particular activity or historical recollection for which the fish is famous; also a "Raisin Day" because of the wonderful benefit we all derive from the popular little fruit since prohibition became an indoor sport for the revenue department; "Orange Day," celebrating the wonderful crop which still holds California famous, and other excuses to give the busy merchant a chance to vacate his shop and play, and in consideration of the fact that the automobile has now attained that place in either ordinary or extraordinary business or social life has to be considered THE thing, the Governor of California, Honorable W. D. Stephens, was appealed to and promptly responded with a proclamation making Saturday, May 14, "Automobile Day" in the State of California, thereby pushing the fish and the raisin in the background for twenty-four hours at least.

Now we've got a proclamation, what shall we do with it?

At noon of Tuesday immediately preceding the auspicious day a bright idea was flashed into the office of the secretary of the Citrus Belt Auto Trades Association in Pomona, and within an hour he was before the City Council, who then fortunately were holding their regular session, and obtained from them permission to use one block of the principal down town business section to be used as an open air automobile show. The idea was green and undeveloped, in other words, a "flyer," but when mentioned to the local dealers they swallowed it, bait, hook, line, sinker, rod and basket with the result that it was necessary to appeal to the council members for another block in order to accommodate the applicants for space and if any interested reader thinks that a worth while automobile show cannot be gotten up on three days' notice the results of the one now under discussion proved that it can be, but the one handling the details will certainly know he's busy and working.

Saturday morning arrived and the chief of the fire department with his men washed off the street, making it shine "like a nigger's heel," electricians got busy and strung strings of vari-colored incandescents across streets from the ornamental light posts. One hundred twenty-five large American flags

borrowed from the city park department were draped over the line of the sidewalk almost completely enclosing the two blocks of street. Traffic was suspended therein and with the high school band waking the dead and cheering the living, every dealer in town—it was a real 100 per cent affair—eighteen of them, brought in their exhibits to the space which they that morning had drawn "from the hat" and with a few opening words from the Mayor the show was on.

The local newspapers having generously done their share in the short time allotted, a crowd was on hand from the start and continued throughout the day until nine o'clock, when the show closed. Professional entertainers had also been secured to keep the crowd in good humor and moving from point to point, but the principal point noticeable during the day was the point of the many salesmen's pencils or as one salesman put it, "two sales already, A. V., and I'm sure pushing my pencil." That is where the boys began to "ring up" that proclamation in the cash register.

A cash prize of \$10 was also offered by the committee in charge for the best 50-word essay on the subject, "Why I Should Buy an Automobile, Right Now." Also there was one person in the crowd who had been given a \$5 bill to give to the first person who should ask him—

just him, not someone else—the question, "When Should I Buy a Car?" All psychological, but the show helped in that delightful sport so very popular and known as "ringing it up in the cash register." Why don't some of you fellows try the stunt. It's a winner.

Respectfully submitted,

A. V. STORER, Secretary,
Citrus Belt Auto Trades Association,
Pomona, Cal.

Appreciation of Summer Merchandising Number

Editor Motor World: In your issue of April 27 you have an article, "How to Analyze Territory for Sales," which was studied with great interest by the writer. We take this opportunity of complimenting you on the valuable information obtained in your magazine.—The Long Island Franklin Co., Jamaica, N. Y.

Editor Motor World:

Our association desires to compliment Motor World upon its Summer Merchandising Number. In fact, we thought so much of the many good things it contained that we sent a bulletin to our members calling their attention to this issue.—Cleveland Automotive Trade Association, Cleveland, Ohio.

How Pomona Dealers Cashed a Proclamation



This open air automobile show was held in Pomona, California, to celebrate the state Automobile Day, May 14. A. V. Storer, secretary of the Citrus Belt Automobile Trades Association, who conducted it, tells about it in a letter on this page. Read it: you may find in it an idea for a similar activity in your town.

SYSTEM IN BUSINESS

This Department Is Intended to Assist Motor World Readers in Working Out Their System Problems — It Will Answer Questions Concerning System and Accounting

Are You Treating Each Department Fairly in Distributing Overhead?

THE method of distributing overhead expense among the various departments has a most important bearing upon the profits shown by the individual departments. There is no standard rule for apportioning this expense, and the very nature of it prohibits the adoption of any method that gives absolute accuracy. Overhead includes all expenses which can not be charged directly to some department. Some of the items that go to make up overhead are administrative salaries, rent, heat and light.

Take the case of administrative salaries in the accounting department. It is impossible to apportion this expense exactly among the various departments in proportion to the benefits received. Similarly in the case of rent, the service and storage departments may occupy the major portion of the building, but, on the other hand, the sales department is given the more valuable space on the street. Obviously a distribution of overhead on the basis of the areas occupied by the various departments would not be an equitable arrangement.

The distribution of overhead must be made on an arbitrary basis, and Motor World recommends that it be distributed in accordance with the gross profits of the various departments. In this way the most profitable departments bear the greatest share of the general expense.

The weaker ones are given an opportunity to become more profitable, because the load placed on them is lightened on account of their weakness.

The accompanying chart shows the effect of redistribution of the overhead in accordance with the method recommended by Motor World. This dealer had been distributing his overhead in accordance with the following arbitrary rule: Car sales, 26 per cent; accessories and parts, 12; garage, 10; rentals, 1; repair shop, 42; tireshop, 6; paintshop, 3. The result was that during the month of January the shop lost \$77.96. It made a gross profit of \$128.30, but the overhead burden placed upon it was so heavy that it showed a loss of \$77.96. This dealer could give no reason for burdening the repair department in this manner.

Reapportioning the overhead according to the Motor World method made every department profitable. This will always be the case if the gross profit on the entire business is greater than the overhead. Of course, this procedure shifts the burden to other departments, and possibly the managers of these departments will not be particularly well pleased with the new distribution. It means that they will have to produce greater results if their departments are going to show profits as great as they had previously.

In order to put this new system into

effect and to secure the co-operation of the department heads, this dealer has put a bonus plan into effect. The department heads are on a salary basis, but the dealer has agreed to pay them a fixed percentage on every dollar of gross profit over and above that earned by the department last year. To date the results obtained have been very satisfactory.

Book Review

Acceptances, Trade and Bankers', by Park Mathewson. Price, \$3.50. D. Appleton & Co., New York City. A comprehensive book on acceptances and acceptance payment. It is divided into three parts. Part I is on the theory, procedure and practice of acceptance payment. The business man is shown how the acceptance system should be installed, operated and controlled. Results of a co-operative investigation covering all lines of business are given. Part II classifies and digests the rulings and opinions of the Federal Reserve Board down to 1920. Part III outlines methods and arguments for a campaign to induce the use of trade acceptances. This section offers material easily adapted to the use of manufacturer, wholesaler or retailer. Many forms are included which illustrate acceptance forms and accounting methods.

COMPARISON BETWEEN THE NEW AND OLD METHODS OF DISTRIBUTING OVERHEAD

Department	Gross Profit	Old Overhead, Per Cent	New Overhead, Per Cent	Old Overhead, Division	New Overhead, Division	Old Net Profit	New Net Profit
New cars	\$420.48	26	62	\$127.69	\$304.48	\$302.79	\$126.00
Used cars	10.00						
Accessories	52.06	12	7	58.93	34.38	— 6.87	17.68
Garage	9.06	10	1	49.11	4.91	—40.03	4.15
Rentals	37.64	1	5	4.91	24.56	32.73	13.08
Repair shop	128.30	42	19	206.26	93.31	—77.96	34.99
Tireshop	11.28	6	2	29.47	9.82	—18.19	1.46
Paintshop	25.67	3	4	14.73	19.64	10.94	6.03
Total	\$694.49	100	100	\$491.10	\$491.10	Profit . \$346.46 Loss ... 143.07	\$203.39

Profit . \$203.39

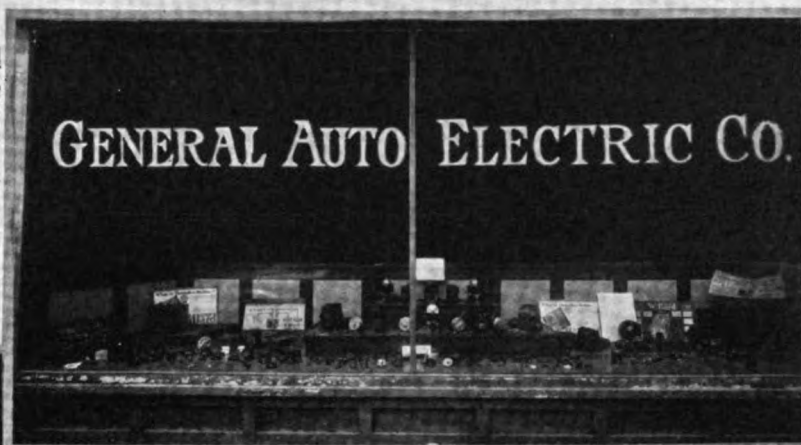
The minus signs in the second column from the right indicate losses.

The new system makes all departments profitable.

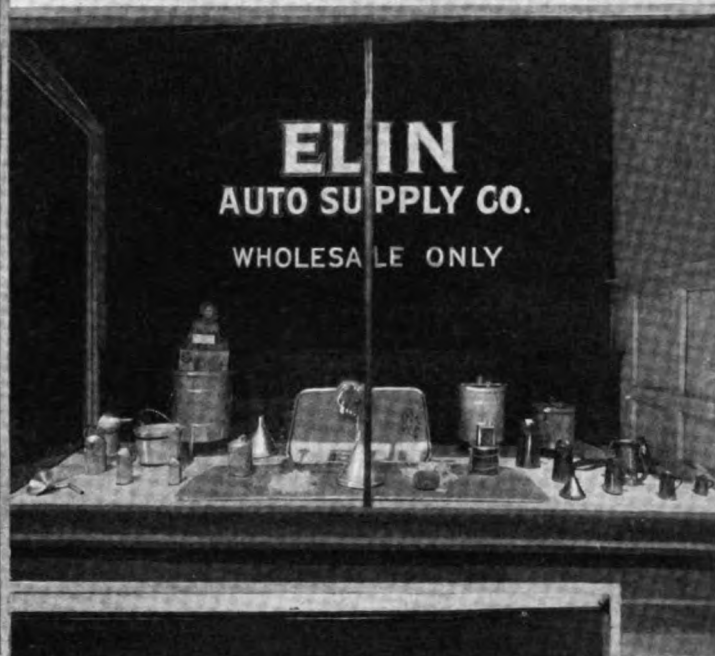
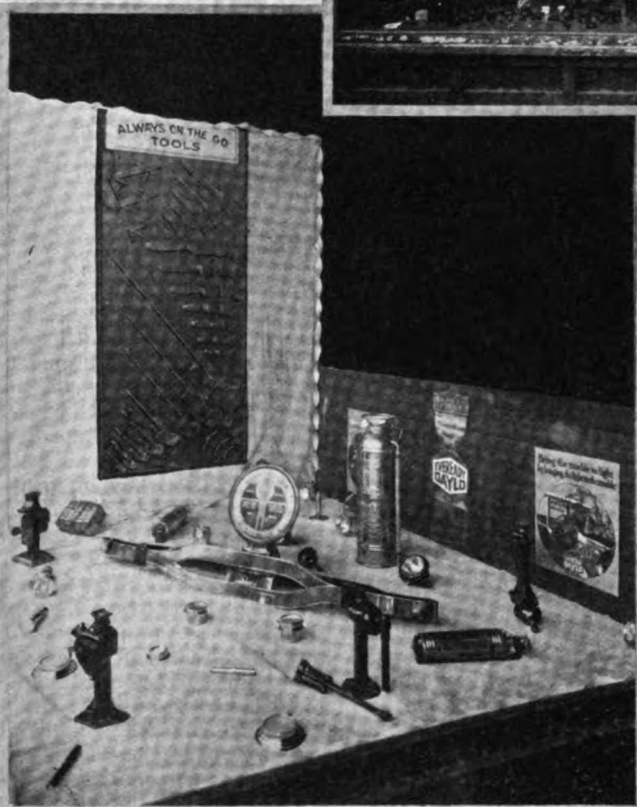
The figures are for January.

Can You Use Any of These Display Ideas?

This window is built of grained wood and highly polished. The steps in the center provide a neat, effective means of displaying electrical service items. General Auto Electric Co., magneto and battery parts and service, Halsey St., Newark, N. J.

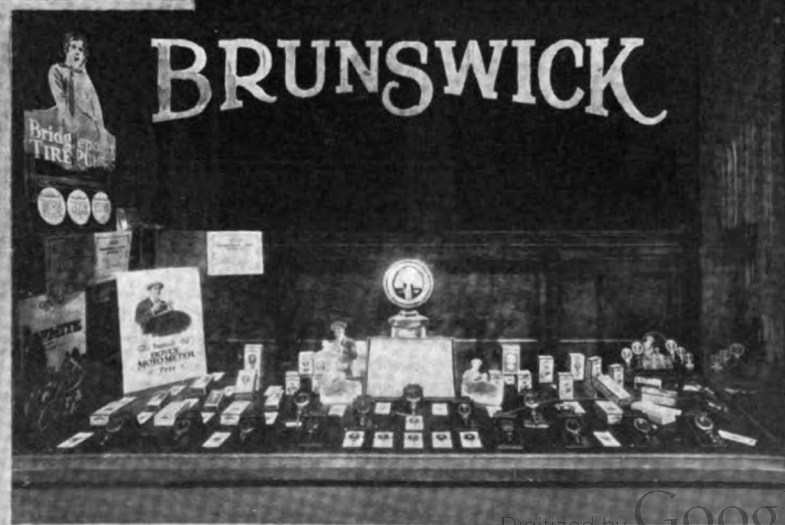


Here's a window to catch the eye of the private garage owner. It consisted principally of galvanized iron articles for the care of the car. Elin Auto Supply Co., automotive equipment jobber, Halsey St., Newark, N. J.



In this small window the Economy Auto Supply Co., automotive equipment jobber, Newark, N. J., got effective display for a line of wrenches by placing the board on the side wall of the window. A number of sales were directly traceable to this display during the two weeks it remained in the window.

Here is a good example of what can be done with a single line display. This window was made by the McLeod Auto Supply Co., Paterson, N. J., using Boyce Moto Meters and cut-outs supplied by the maker.



A Department of

BETTER MECHANICS

Conducted by J. HOWARD PILE

No. 199

When asking for information, please state whether you maintain a permanent file of Motor World, as many inquiries are answered by reference to previous issues

General Shop Adjustments on the Wills Sainte Clair Delco Ignition System

Connections from the Distributor to the Plugs—Lubrication of the Moving Parts—Adjustment of the Contacts

THE general construction and nomenclature of parts on the Delco ignition system used on Wills Sainte Clair models is shown in Figs. 1 and 2, the former being a top view and the latter a sectional view. The vertical shaft carrying the rotor turns clockwise, viewed from the top. There is no electrical connection between the two polished steel rotor buttons.

The leads from each of the eight high tension terminals should be connected to the spark plugs in the cylinders which carry a corresponding number.

The high tension lead from the ignition coil, whose primary circuit is connected to the right hand set of timing contacts (viewed from the driver's seat) must be connected to the terminal adjacent to the center terminal of the distributor head. Ignition current from this coil operates the right bank of cylinders, 1, 3, 4 and 2 through the rotor button connected with the carbon brush.

The left bank of cylinders, 8, 6, 5 and 7 receive ignition from the other coil whose high tension lead connects with the center terminal on the distributor head. This current passes through the rotor button connected with the plunger contact in the center of the distributor head.

Lubrication of the upper ball bearing is taken care of by placing three or four drops of engine oil in the oiler every 500 miles. The lower bearing, made up of two bronze bushings, receives oil from the crankcase through a wick which extends upwards through the hollow distributor shaft.

Care must be taken to see that the leads from both primary and secondary terminals of the ignition coils connect

to their correct terminals on the distributor.

The distances between the contact points when opened by the cam are adjustable by means of the contact screws which carry the stationary contact points. They should be adjusted so that they are .020 in. apart when the fiber rubbing block of the contact arm rests

noticeably, it is recommended that the ignition timing be checked, and if necessary corrected after each adjustment of the contact points.

After assembly of the parts of a repaired distributor it will become necessary to correctly adjust the two sets of timing contacts so that they separate at intervals of exactly 30 and 60 deg. of distributor shaft travel.

These values correspond to 60 and 120 deg. on the flywheel, which are the intervals of crankshaft travel between cylinder firings. To obtain the correct setting, first adjust each of the two sets of contacts to the correct maximum dimension of .020 in. Then shift slightly the position of the contact point mounting plate until a setting has been found which will cause the contacts to open exactly at 30 and 60 deg. intervals. This plate may be shifted within small limits after loosening the three screws securing it to the distributor housing, and allowing the plate to pivot on the screw nearest the oiler.

In order to accurately measure the 30 and 60 deg. intervals the mechanic should connect a small lamp in series with each set of contacts to indicate the instant the points separate. An ordinary protractor, or similar measuring device calibrated in degrees, and approximately 4 in. in diameter must be used to measure the number of degrees of interval between the separation of the contacts. Small scratches may then be made on the distributor housing opposite a previously made scratch or mark at any point of the edge of the rotor, indicating the actual intervals between the separation of the two sets of contacts. These angular distances may then be measured with the

Better Mechanics Articles in a Book

VOLUME I of the second edition of the bound book of better mechanics articles is now off press. Volume II is in preparation and will be printed in a few weeks. These books include all better mechanics articles published from the beginning of the department in Dec. 13, 1916, to the beginning of this year.

directly on top of the cam lobes. Due to the slight wear of the fiber block during the first 2000 miles driving it may be necessary to make one or two adjustments of the points, after which practically no attention is necessary other than to occasionally note that the adjustment conforms to specifications.

The thickness of the gage on the distributor wrench provided in the tool equipment should be used in adjusting the points.

When a slight readjustment of the contact points will not affect the timing

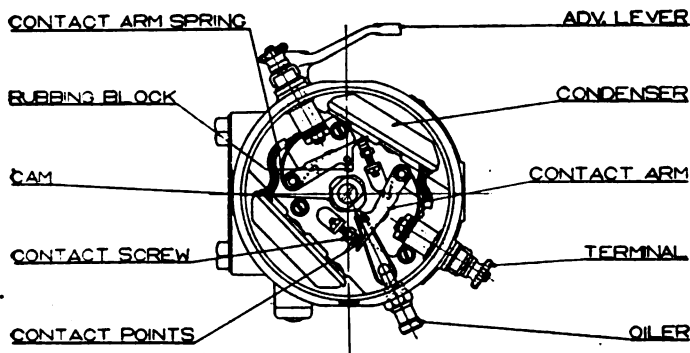
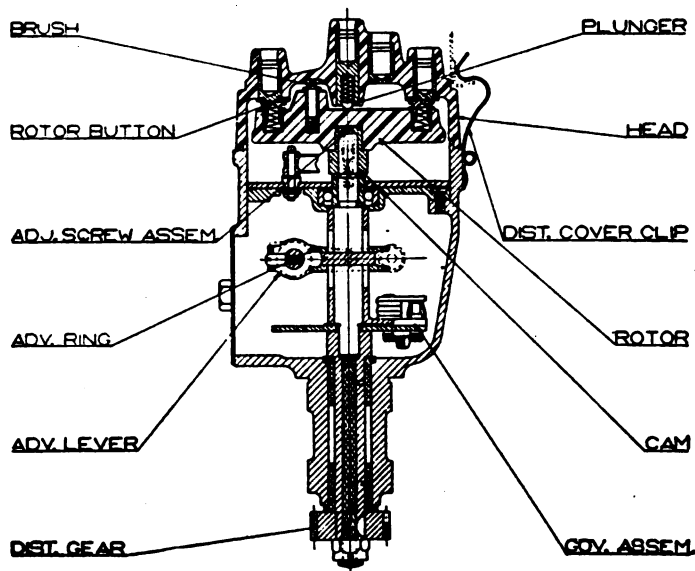


Fig. 1—Top view of the distributor used on the Wills-Sainte Clair car. Fig. 2 (right)—Sectional view of the distributor, showing the relation of the parts and the nomenclature. This is a Delco system



protractor and if not correct, the contact mounting plate may again be slightly shifted.

If during the shifting of the plate, the adjustment of the contacts is appreciably changed, their adjustment should be corrected, after which a recheck should be made with the protractor and lamps of the intervals between the separation of the two sets of contacts. It would be advisable to check up once or twice during the first 2000 miles driving the adjustment of the contacts so that any necessary correction might be made.

A very small amount of light grease or vasoline should be applied to the surface of the breaker cam each 500 miles. The rubber track containing the eight inserts or contacts should receive a very small amount of vasoline applied occasionally during the first 1500 miles driving. The track will then become glazed and no further lubrication will be required. It is then only necessary to wipe out the distributor head occasionally with a clean cloth. No lubricant is required on the slip ring in the distributor head, against which the carbon brush rests. The center plunger contact in the distributor should always make contact with the rotor, and the carbon brush in the rotor should always make contact against the slip ring.

A slight blackening of the surface of the distributor head inserts has no effect whatsoever upon the perfect performance of the ignition system.

The distributor wrench which is a part of the tool equipment and is used for adjusting the contact point separation also carries a gage for adjusting the gaps between the spark-plug electrodes. The thickness of the gage is .035-.038 in. and each spark-plug should be adjusted accordingly.

The Automobile Repairman's Helper.

By S. Thornton Williams and J. Howard Pile. U. P. C. Book Co., 243-249 West Thirty-Ninth Street, New York City.

This, the second edition of the Automobile Repairman's Helper, is so greatly enlarged and so radically changed that it bears little resemblance to the first edition which was printed some two years ago. The contents consist of the Better Mechanics articles which have been appearing in Motor World for the past four years, and these are edited and arranged in an orderly manner with a complete index so that any subject or any car or truck can be located very quickly.

The articles were prepared with the thought of assisting motor car mechanics to better methods of care, repair and maintenance of motor vehicles and in the preparation of the material over 2000 shops have been visited in various parts of the country, factory service departments called upon for data and various methods of performing operations observed and studied.

The present edition, including practically all articles up to date, has become so large that it was necessary to divide it into two volumes. The first volume, now ready, takes up building design and layout, systems for saving time and money, shop equipment, standard shop practice on cylinders, electrical systems, batteries, bearings, etc. The following

cars and trucks are covered by complete detailed mechanical instructions: Dodge, Overland, Chevrolet, Reo, Cadillac, Studebaker, Oakland, Hupmobile, Willys-Knight, Liberty, Cole, Chalmers, Autocar, Republic, Reo truck, Garford, Koehler, and Nash truck.

Volume II, which is in preparation and will be printed shortly, takes up other problems of the repairshop and gives detailed shop operations on a number of other cars and component parts, such as clutches and axles. The volumes are sold for \$3 each.

WESTERN COMPANY BUYS 8 MORE STORES

SEATTLE, June 27—The Western Auto Supply Co., operating a large chain of automobile tire and accessory stores in the western half of the United States, and capitalized at \$3,000,000, has just completed negotiations for the purchase of the eight large stores owned and operated by the Autoparts Supply Co., a half million dollar corporation, operating in Seattle, Portland, Tacoma, Spokane, Yakima, Bellingham, Walla Walla and Boise.

For the present the stores of the Autoparts Supply Co. will be operated as a subsidiary company, and there will be no radical change in management or personnel.

STANDARD COTTER PIN SIZES

Diameter	Drill No. for Hole	Standard Lengths									
		5/16	7/16	1/2	5/8	3/4	7/8	1	1 1/4	1 1/2	1 3/4
1/16	48	..	..	..	..	..	..	..	..	..	..
3/32	36	..	..	..	..	..	..	..	..	..	..
7/64	30	..	..	..	..	..	7/8	1	1 1/4	1 1/2	1 3/4
1/8	28	..	..	..	..	..	7/8	1	1 1/4	1 1/2	1 3/4
9/64	21	..	..	..	..	..	..	..	1 1/4	1 1/2	1 3/4
11/64	11	..	..	..	..	..	..	..	..	1 1/2	1 3/4
13/64	2	..	..	..	..	..	..	..	2	2 1/4	2 1/2

RUBBER HOSE

Inside Diam.	Outside Diameter			
	1 ply	2 ply	3 ply	4 ply
1/2	3/4	13/16	7/8	15/16
3/4	1	1 1/16	1 1/8	1 3/16
1	1 1/4	1 5/16	1 3/8	1 7/16
1 1/5	1 1/2	1 9/16	1 5/8	1 11/16
1 1/2	1 3/4	1 13/16	1 7/8	1 15/16
1 3/4	2	2 1/16	2 1/8	2 3/16
2	2 1/4	2 5/16	2 3/8	2 7/16
2 1/4	2 1/2	2 9/16	2 5/8	2 11/16
2 1/2	2 3/4	2 13/16	2 7/8	2 15/16
3	3 1/4	3 5/16	3 3/8	3 7/16

THE LAW

By GEORGE F. KAISER

Perplexed?

Does some point of law perplex you?

Why don't you ask MOTOR WORLD's legal editor to discuss the question?

Joint Suit Recommended Here

Editor Motor World: As subscribers we would like to know what we can do in the following case. Some time ago a man brought in a small runabout which had been somewhat smashed up in a collision. It would not run and had to be towed. We repaired it and furnished the necessary parts to make it go. We understand it was owned by a well known company in a town near here and that the man who brought it in was a salesman of the company. That he is a salesman is not denied. He refuses to pay us our bill, saying the company should pay as it owns the car. The company on the other hand likewise refuses to pay, saying it furnished the car to the salesman on the agreement that he was to pay all upkeep, repair expenses, etc., to keep it on the road.

We understand he, the salesman, is leaving the company this month. Each one passes the buck to the other and meanwhile we cannot get the money we have earned and are entitled to. Now what would you do in the circumstances to get the money? We know we were foolish to let go of the car as we could have held it for our lien, but we did let it go because the company that owns it is so well known and is good for any bill. —R. A., Rochester, N. Y.

Answer.—Of course you have no means of knowing what the true facts of the case are. The salesman ordered the repairs—the company owns the car—the salesman is an employee of the company. The company should be held responsible for repairs necessary to put the car in running order and to keep it going provided this does not amount to a virtual rebuilding of the car. In turn it can sue the salesman for breach of contract. Put it up to the company this way and see if they will not pay you as you of course are an innocent third party acting in good faith. If they will not pay you go to local counsel and have him sue both the company and salesman jointly. You will surely get a judgment against somebody.

This Action Rescinds Contract

That where a person makes a contract to sell a car which he does not own, and then acquires title to it and sells it to another, he rescinds the contract, when it contains an option giving him the right to rescind, was the decision by the Supreme Court of Wisconsin in *Rowlands vs. Electrical Const. Co.*, 182 North Western Rep. page 736.

The court held that an agreement con-

taining an option to rescind was not a bill of sale but merely an executory contract of sale, under which the buyer and seller could pass title if they saw fit or decline to carry out its terms if they preferred.

An Insurance Dispute

Editor Motor World: An automobile owner insured his car in an interinsurance association paying a membership fee of \$17 and an advance premium of \$10 which presumably was to pay for six months' insurance. At the end of six months the insured notified the company he had decided to discontinue with them. Company claims that before it will cancel insured must pay an additional premium of \$27 and threatens suit to collect. What would be your advice under this condition?—L. & J. Co., Monmouth, Ill.

Answer: It is quite possible the car owner obligated himself legally to pay an additional premium to the interinsurance association. All sorts of additional amounts, assessments, etc., may be levied by associations of this kind if so provided in their charter and by-laws to which members are assumed to have assented when they "joined."

Under the circumstances I would have a competent local attorney make an investigation, getting in touch with the company to ascertain on what ground they make their claim.

Moral: Don't join associations you know nothing of and don't give your consent either expressly or impliedly to be bound by provisions you know nothing of.

Dealer Policy Ruling

The Massachusetts Supreme Judicial Court, in the case of *Cass vs. American Central Insurance Co.* reported in 128 N. E. Reporter at page 716, that a dealer policy providing that, "all automobiles owned by assured and held by him for sale," should be covered, included new cars, second-hand cars, and junk cars.

The policy which was a so-called running policy, was therefore held to insure all automobiles which could be included under the above clause when it was given its ordinary meaning.

Decision Favors Employee

The New York Supreme Court, recently, in the case of *McCloskey vs. Richard Hellman, Inc.*, reported in 187 New York Supplement at page 834, decided that when the State industrial commission found that a chauffeur's fall

from a truck was caused by a sudden jerk of the truck instead of by his dozing or sleeping, while another chauffeur on the truck was driving, this decision was final and the widow of the chauffeur was accordingly entitled to death benefits, under the State compensation law for his death.

In another lately decided California case, an employee who sought to recover damages for injuries under the state workmen's compensation act, was denied relief when it was shown that at the time of his injury he was really on his way to his place of work, and was not engaged on an errand for his employer.

The court held that as the injury did not arise out of the course of his employment there was no responsibility on the part of the employer and consequently held him blameless. *Clapp's Parking Station vs. Industrial Accident Commission*, 197 Pacific Rep. page 369.

Can Manufacturer Refuse to Sell?

Editor Motor World: Is it legal for a manufacturer to refuse to sell to a jobber or a retailer without giving any good reason for his refusal to do so? We have heard from various sources that this matter had been passed upon by the Supreme Court of the United States and would be glad to know just what the law is in this regard.—D. B. C. Co., Atlantic City, N. J.

Answer.—There is a case now before the U. S. Supreme Court on your question, but it will not be argued until next fall. That is the so-called *Beech Nut* case. It will be reported here when a decision is finally handed down.

The Circuit Court of Appeals (U. S.) some time ago in the case of *Great Atlantic & Pacific Tea Co. vs. Cream of Wheat Co.*, 227 Fed. 46, held that "before the Sherman Act went into effect it was the law that a trader might reject the offer of a proposing buyer for any reason that appealed to him; it might be because he did not like the buyer's method of doing business or because he had some personal difference with him, politically, racial or social. That was purely his own affair, with which no one else had any concern. Neither the Sherman Act nor any decision of the Supreme Court construing the same has changed the law in this particular. We have not yet reached the stage when the selection of a trader's customers is made for him by the Government."—Followed in 253 Fed. 527 and 256 Fed. 573.

Repairshop Shortcuts

No. 2978—Grease Barrel Cover.—To prevent dirt and grit from getting into the grease barrel, it is fitted with a round wooden cover with a handle and leather hinge. The mechanic finds it easy and handy to use and the lid therefore stays on.—Scott S. Bond, Capitol Auto Sales Co., Hattiesburg, Miss.

No. 2979—More Leverage on Chain Tool.—A tire chain tool is given more leverage by putting two pieces of $\frac{1}{2}$ -in. pipe on the handles. These give a good grip and the work can be done with less effort. The pipe can be driven onto the handles.—F. A. Smith, New Eberhart Garage, Gettysburg, Pa.

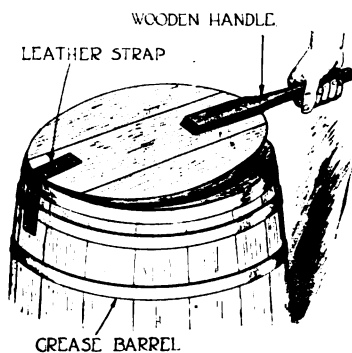
No. 2980—Removing and Replacing a Disk Clutch Cover.—To prevent the cover from springing out when the nuts are loosened all the way around, two long cap screws the same size are used with nuts that will allow the gradual release of the cover. The cover is replaced in the reverse manner.—Albert E. Dailey, Ever-Ready Garage, Chester, Pa.

No. 2981—Replacing Ford Crankcase Gasket.—To hold the cork gasket in position while lifting the under pan into place, several paper clips made of wire are used. Before tightening the cap screws, the clips can be slipped out.—James M. Hayes, Hayes Mercantile Co., Haigville, Neb.

No. 2982—More Strength in Trestle Legs.—If the tops of the legs are sawed out, as shown at the right of the illustration, the top wood piece takes most of the strain, while if sawed as shown at the left, the nails have to take all the strain.—S. E. Gibbs, Corydon, Iowa.

No. 2983—Elevator Door Lock.—With such a lock the door cannot be opened from the outside and the passing floor of the elevator will not catch it, as the top piece is bent so as to allow only enough motion to release the door.—F. A. Person, Willys-Overland, Inc., New York City.

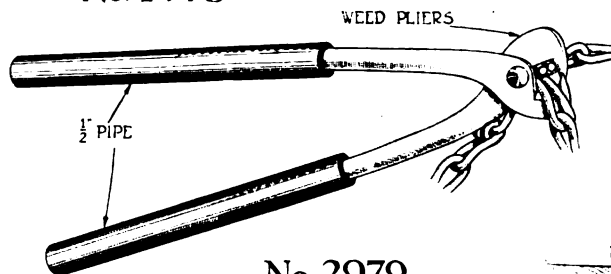
No. 2984—Needle Seat Spanner for Holley Carburetor.—This is made by cutting a slot in one end of a Ford piston pin and filing or grinding the other end so that a solid wrench will turn it.—John Hertwick, M. & H. Garage, Dearing, Kan.



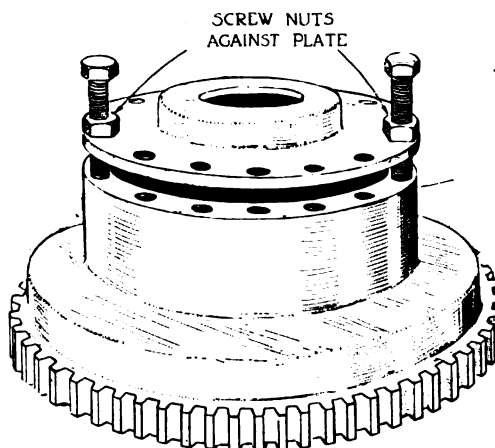
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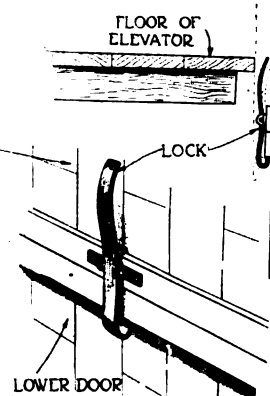
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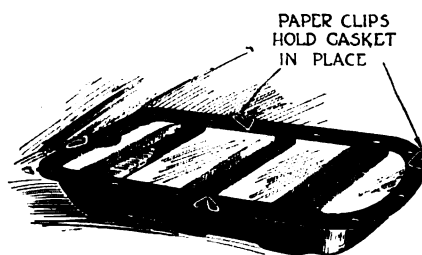
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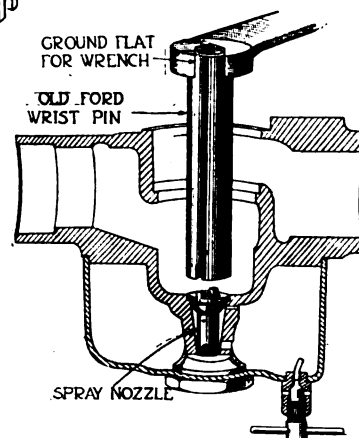
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No. 2983



No. 2981



No. 2984

EARN A DOLLAR

SEND in a sketch and a description of the device you doped out to make your work easier. Motor World will pay a dollar for every idea accepted for publication.

SCIENTIFIC CONSTRUCTION

GARAGES

SHOWROOMS

REPAIRSHOPS

Conducted by DONALD D. BLANCHARD

Two Businesses in One Building Inadvisable

Clash of Interests Certain to Cause Trouble—Filling Station Reduces Efficiency of Building

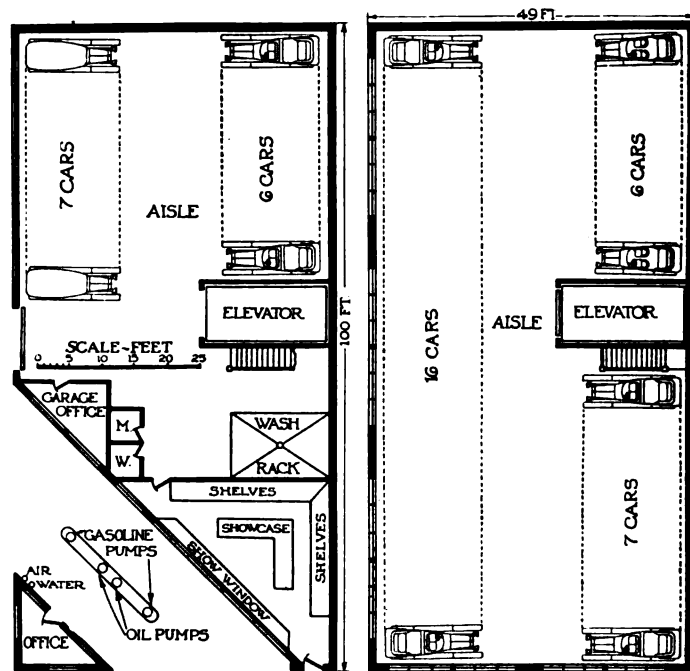
IT is the intention of the owner of this building to lease the garage to one party and the filling station to another. It does not seem to us that this will prove to be a satisfactory arrangement inasmuch as there is almost certain to be a clash of interests. The garage man will no doubt want to sell gasoline and lubricants to his customers, and further, he will look with longing eyes on the filling station trade as an outlet for accessories. We recommend that the two businesses be operated by the same management.

The filling station forms a tunnel across the corner of the building. This is not an efficient arrangement as there is no street frontage available for the accessory store. Furthermore, the filling station takes up so much space that only about half of the first floor is available for storage. This is a serious drawback because storage space on the second floor costs more to provide than on the first floor. We would suggest that the gasoline pumps be placed on the curb unless prohibited by local ordinance.

The plan shown was designed with the idea that the garage and filling station would be operated separately. The

MOTOR WORLD is glad to receive and answer inquiries for garage plans, but in order that there may be as little delay as possible in submitting the plans desired it is imperative that the following information be given:

Size of plot, with rough sketch showing shape and its relation to adjoining plots; name and number of departments operated; number of cars to be shown in salesroom; number of cars in garage; any other pertinent details.



The filling station takes up so much space that there is little room left on the first floor for car storage



The filling station forms a tunnel across the corner of the building

small triangular office on the corner is for the use of the filling station. The accessory store and garage office both face on the filling station. The entrance to the accessory store is on the main street. There is no room for display windows on either of the streets, and consequently the only opportunity for display is afforded by the window facing on the filling station.

The indicated storage capacity of the first floor garage is thirteen cars. The elevator is placed directly opposite the entrance to the garage as this is the most convenient location. The upper story has an indicated capacity of 29 cars. The aisle space opposite the elevator is rather narrow and a turntable will, no doubt, be necessary here.

Due to the fact that the filling station forms a tunnel the appearance of the building is unusual. The walls and roof of the filling station should be finished in some light color.

"Old Stuff"

In Which an Old Timer Browses Through Some Ancient Ads and Proves Some "New" Ideas Are Hand-Me-Downs from Other Days

"TELL me, honored sire," said the cathedral domed young merchandising marvel, seeking recognition of his prowess at the knee of the hoary headed old venerable who sold 'em in the nineties: "Have I not crossed the Rubicon—cast the die, as it were—have I not unfurled new merchandising Excelsiors?" And from his pocket he produced wet proofs of a few ads in which the dominant selling lines were:

"The Automobile Is a Necessity."

"The Greatest Automobile Value in the World."

Over the old timer's face there spread a "Gol darn it, my income tax is due again" expression.

"Old stuff, young man, OLD STUFF," barked the venerable one.

"O-l-d S-t-u-f-f! Real old hoary-headed, wrinkled-faced sweat of the jaw that agitated the horseless carriage salesmen back in the stone age days of the industry—back when they hadn't taken the whip-sockets off the dashboards of the gasoline buggies and Winton was still crowing about 'The only motor that cranks itself.'"

"Look-a-here, young duffer, the fact that there was only one Peter the Great doesn't prove that history doesn't repeat itself," and the old timer reached into the off-side drawer of his desk bringing forth a sheaf of newspaper clippings yellow with age.

"Hum-m-m," he mused, as he fingered through the pack. "Look-a-this—" and he adjusted his goggles just north of the wart on his nose and read:

"Oldsmobile Limited—A Marvel of Mechanical Perfection—Forty-two inch Jinrikisha Wheels—A Wonderfully Flexible Motor—Easiest Riding Car Built—It is a less costly car to maintain for the reason that the large wheels intercept the jars on the engine and transmission, etc., etc.

"And here's another, yea bo, look-a-this. 'Is the Automobile a Toy, a Luxury, or a Necessity?—Hardly a toy because you expect it to render service—Not a luxury, because owners find they NEED its service—Rather a necessity since its purpose is to render NEEDED SERVICE. An automobile ought, therefore, to be bought just as you would purchase any other necessity—WITH REGARD TO ITS QUANTITY AND QUALITY OF SERVICE AND THE COST OF THAT SERVICE. You should buy a GOOD car. By a good car we mean the WINTON SIX. The Winton

Oldsmobile Limited
42 inch Jinrikisha Wheels

Oldsmobile Limited
A Marvel of Mechanical Perfection

Oldsmobile Limited
42 inch Jinrikisha Wheels

Is the Automobile a Toy, a Luxury, or a Necessity?

The Winton Motor Carriage Co.
The World's First Exclusive Manufacturer of Sixes
BROADWAY AND 70TH STREET, NEW YORK.

WINTON SIX

Look at These Ads
From the Scrap-Book
of an Old Timer

'Member the days when they crowed about mechanical perfection and sold the old birds that inspired these ads? Yet, you notice, they were talking about mechanical perfection and the motor car as a necessity even then

Six has the only motor in the world that CRANKS ITSELF—and that ad was printed back in 1909.

"Oh, here's another old bird—'member the car well—came out in 1909—'Studebaker-Flanders 20—\$750—The Greatest Automobile Value the World Has Ever Seen.'

"Yea, those were the happy days—what have we here? Oh, yes—'Price Will Not Be Increased Before February First—There's a bigger shortage of automobiles of all kinds this year than ever before—won't be one car for every four prospects'—Oh, little one, those WERE the happy days.

"So you think you're pulling some new stuff? Say, what's all the shootin' for? You're just plain doing what all of us did when you were smokin' cornsilk up

behind the barn, twenty years ago. The only thing that's different is the cut of the car.

"Say, wasn't that some old oil can those days? Look at it, will you—no front doors, windshield braces, bulb horn, high seats, light wheels, right hand drive, control levers outside the car, gas and oil lamps, wooden dash—say, wasn't she a pippin—

"That's the car WE sold—about which we yelled: 'Greatest Automobile Value in the World'—'The Automobile Is a Necessity'—'The Price Cannot Be Reduced'—just as you're doing to-day, and—so you think you're crossing Rubicons, casting the die. Kick your switch young fellow, you're in reverse.

"Good stuff? Sure. But—Old stuff—OLD STUFF."

Automotive Equipment

ANCHOR-LOX MOTOMETER LOCK

This lock is screwed into position, but cannot be unscrewed. A reducer bushing is packed with each lock. If the motometer has a $\frac{5}{8}$ -in. thread the bushing is not required; but it is necessary if the motometer has a $\frac{7}{8}$ in. thread. Price, \$1.75.—Wayne Bumper Co., Fort Wayne, Ind.; Sales Department, Happy Rhodes Co., Fort Wayne, Ind.



Anchor-Lox Motometer Lock

EVER KLEAN SEAT PAD

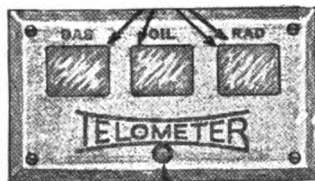
This seat pad consists of two pieces of 17 x 17 in. closely woven rice straw. The edges are bound and reinforced with a strong, non-fading and wear-resisting material. The two pieces are sewed together, thus acting as a combination back and seat pad. The weight is one pound. To facilitate handling by the trade, ten assorted patterns are packed in a large shipping carton. Price, \$1.50.—Wedler-Shuford Co., St. Louis, Mo.



Ever Klean Seat Pad

TELOMETER

This instrument indicates dangerously low oil level, low water or low gasoline in the tank. It flashes a warning automatically by means of an indicator on the dash. The lights in this indicator are furnished with current by the battery.—Telometer Mfg. Co., Inc., 250 Main Street, Binghamton, N. Y.



Telometer

LETERRAIN

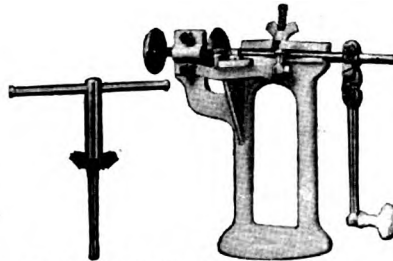
A chemical windshield cleaner. The chemicals which keep the windshield clean in inclement weather are carried in a fabric mitten. The chemicals are said to be of a non-drying nature. It is claimed that one treatment will keep the windshield clear for twelve hours in a heavy rain. It may be applied when the glass is either wet or dry. Each mitten is packed in an attractive box. Twelve boxes are packed in a handy carton, which may be used for counter display. Price, \$1 per box.—B. J. S. Products Corp., Cedar and Greenwich Streets, New York City.



Leterrain

WHITNEY VALVE REFACING LATHE

This lathe is designed to be mounted on the bench or held in a vise. It is adjustable to take any valve from $\frac{1}{4}$ in. to $\frac{1}{2}$ in. stem diameter and valve head diameters up to $2\frac{1}{4}$ in. The feed control is mounted on a sliding block traveling on a

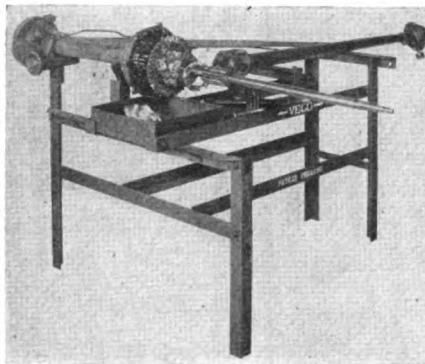


Whitney Valve Refacing Lathe

guide which insures accurate centers and even tension of the valve against the cutter. The cutter is held in place by means of two screws. A crank is attached at the end of the valve stem. Price \$8.50.—R. S. Whitney Mfg. Co., Lewiston, Me.

VECO REAR AXLE OVERHAULING STAND

This stand is designed to facilitate the repair work on all cars having a divided rear axle housing. The rear axle housing is held by one end only, so that the other half may be drawn out and axles or differential assemblies drawn out in the least possible time. The vise jaws are closer together at the top than at the bottom, so that it is unnecessary to screw the hand wheel tight in order to hold a rear construction in the horizontal position. Price \$31.50.—Van Trump-Elsbey Co., 1918 Cherry Street, Philadelphia.



Veco Rear Axle Overhauling Stand

KWIK-AK-SHUN BEARING FITTING COMPOUND

A bearing fitting compound which eliminates the necessity of scraping. It is packed in 3 oz. cans, each of which contains enough to finish about 900 sq. in. of bearing surface, which is equivalent to about 6 engines. Price, \$1.50; six can cartons, \$9.00; 12 can cartons, \$18.—United States Products Company, Highland Bldg., Pittsburgh.



Meyer Valve Port Cap Wrench

MEYER VALVE PORT CAP WRENCH

A special wrench for removing valve port caps. It is equipped with two sets of blades and four hexagon plugs to fit the port caps of different engines. It is designed to eliminate damage and breakage of the caps.—The Carl Meyer Co., 1113 Dort Street, Toledo, Ohio.



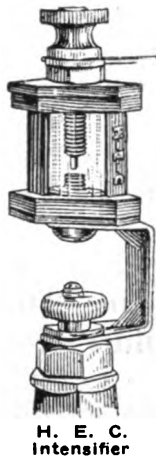
Econometer

ECONOMETER

The purpose of this instrument is to indicate the gasoline mileage of an automobile. It indicates the rate of gasoline consumption in gallons per hour. By reference to the speedometer it is possible to quickly determine the mileage per gallon. For instance, if the econometer shows a consumption rate of one gallon per hour and the speedometer reads 15 miles per hour, the gasoline mileage is fifteen.—Republic Flow Meters Co., Chicago, Ill.

H. E. C. INTENSIFIER

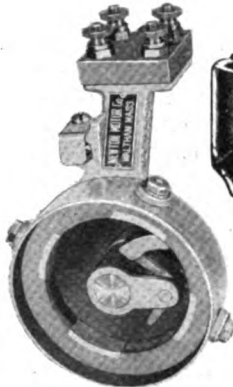
This intensifier consists of an auxiliary spark which is placed in series with the spark plug. The auxiliary gap is located in a glass chamber where its operation can be observed. Price \$1 each.—Hercules Electric Corp., Roxbury, Mass.



H. E. C. Intensifier

NEWTON TIMER

The body of this timer is made of polished steel stamping with an offset aluminum hollow arm which carries the wiring. The binding posts are located on the end of this arm. The contact brush is made out of bronze, the ring is made of fibre and the contacts are steel. The terminals are numbered to simplify installation. Price \$3.85—Contact assemblies, 75c. each.—Newton Motor Co., 830 Old South Bldg., Boston, Mass.



Newton Timer

EUREKA AUTOMOBILE LOCK

This lock is approved by the Board of Underwriters. A reward of \$100 is offered for the arrest and conviction of a thief who is able to drive 250 ft. with a car equipped with this lock. The frame of the lock is a brass casting fastened together with hardened steel parts. The lock itself is of the cylinder type.—Eureka Auto Lock Co., Chicago.



Eureka Automobile Lock

JACKSON'S TIRE TOOL

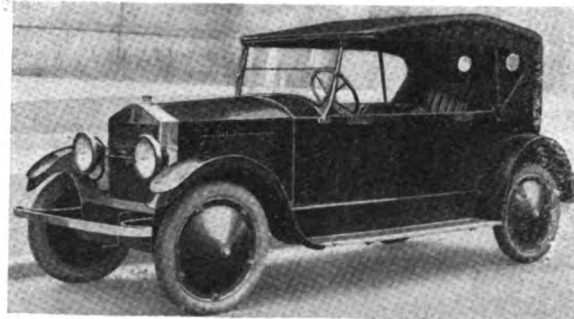
The tool itself is made of steel and grey iron. The spring operated jaws are hooked around the rim about 6 or 8 in. from the split and two solid legs are then hooked on the rim so as to divide the circle into approximately three equal segments. The tool is adjusted to different size rims by means of a turnbuckle. This turnbuckle is also used to collapse the rim. The tool is also adapted for use on Studebaker, Kelsey and Baker rims. Price \$5.—National Safety Car & Equipment Company, St. Louis, Mo.



Jackson Tire Tool

UNIVERSAL TOURING BODY FOR FORDS

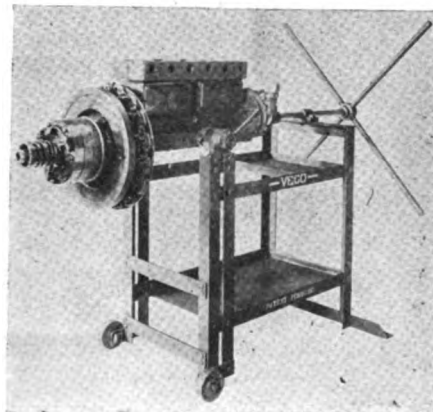
The radiator shell is nickel plated and the hood is long and well ventilated. The windshield is made in two adjustable sections and is given a non-rusting finish. The headlights are large and are equipped with no glare lenses. The running boards are covered with linoleum and bound with aluminum. Front and rear bumpers are included with the body. These bodies are furnished in any one of five standard colors. Price \$500.—Universal Body Corp., Mishawaka, Ind.



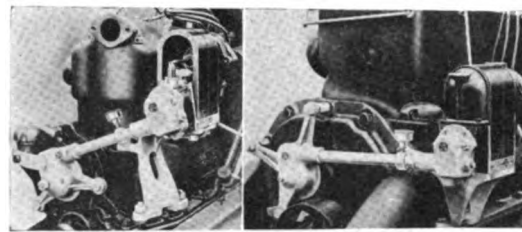
Universal Touring Body for Fords

VECO FORD ENGINE STANDS

In this machine an adjustable engine work bench, bearing fitting machine and a connecting rod aligning jig are all combined in a substantially constructed unit. Tool and part



Veco Ford Engine Stand



Bosch Magneto Drive for Fords and Fordsons



Norman Piston Ring

trays are provided in the most convenient places. The stand is provided with two casters, so that it may be easily moved about the shop. The stand is shipped knocked down and boxed. Price \$39.50.—Van Trump-Eselbey Co., 1918 Cherry Street, Philadelphia.

BOSCH MAGNETO DRIVE FOR FORDS AND FORDSONS

The magneto is supported on a bracket which is bolted to the cylinder block. A transverse shaft drives the magneto from the cam shaft. ZR-4, DU-4 and B-4 magnetos are furnished with the Ford fitting and ZR-4, DU-4 and DU-4-T with the Fordson fitting. The fittings are made for both the Ford and the Fordson.—American Bosch Magneto Corp., Springfield, Mass.

NORMAN PISTON RING

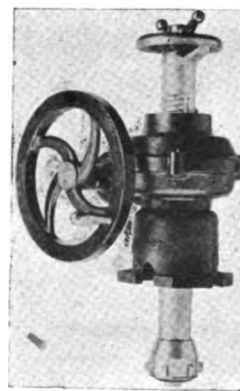
A one piece, flexible, self adjusting hammered ring. The joint construction is unusual. It is constructed of fillets and rounded ends. The projecting end which is called the tongue is rounded so that it will slip by the opposite end without catching. When the point is closed the ring is locked tight. All rings are beveled on the inside edge.—Norman Piston Ring Corp., Peoria Heights, Ill.

RELIANCE GASOLINE STRAINER

This strainer will fit either Fords or Chevrolet 490 cars. It is installed by removing the top of the gasoline tank and screwing in the strainer. The top of the tank fits the threads on the top of the strainer. The wire screen is protected by means of a perforated piece of brass from injury by the nozzle of the gasoline hose. Price \$2.—Reliance Gas Strainer Co., 5135 W. North Avenue, Chicago.

MASTER REBORING TOOL

A special feature of this boring device is a cutter head containing six cutters which are radially adjustable in diameter and operated by means of a plate with a spiral raceway or thread which engages grooves cut into one side of the cutters. This adjustable plate also acts as a clamping plate connected to the end of a bar extending through the spindle and which carries on the other end an index plate and lock nut. The index plate is graduated to read to 1/1000 of an inch. The spindle is keyed to a sleeve contained within the housing, from which it derives its motion. The sleeve is rotated by a worm gear which is mounted on a shaft which also carries the balance wheel.—Master Devices Co.



Master Reboring Tool

Scripps-Booth Builds New Six with Continental Engine

Larger Bore and Stroke and More Power Than the Other Six—Wheelbase the Same—Prices Higher Than the Other Six, But Lower Than the Old Price

A NEW Scripps-Booth Six with a larger engine than the one in the present model and at a slightly higher price than the new low levels of the Model B, has made its appearance and is now in the hands of some of the distributors. As a basis of comparison, here are the prices:

New Six Touring Car	\$1,490
New price on Model B	1,295
Old price on Model B	1,545

The prices on the other body models on the new chassis are: Roadster, \$1,470; sedan, \$2,375; coupe, \$2,350.

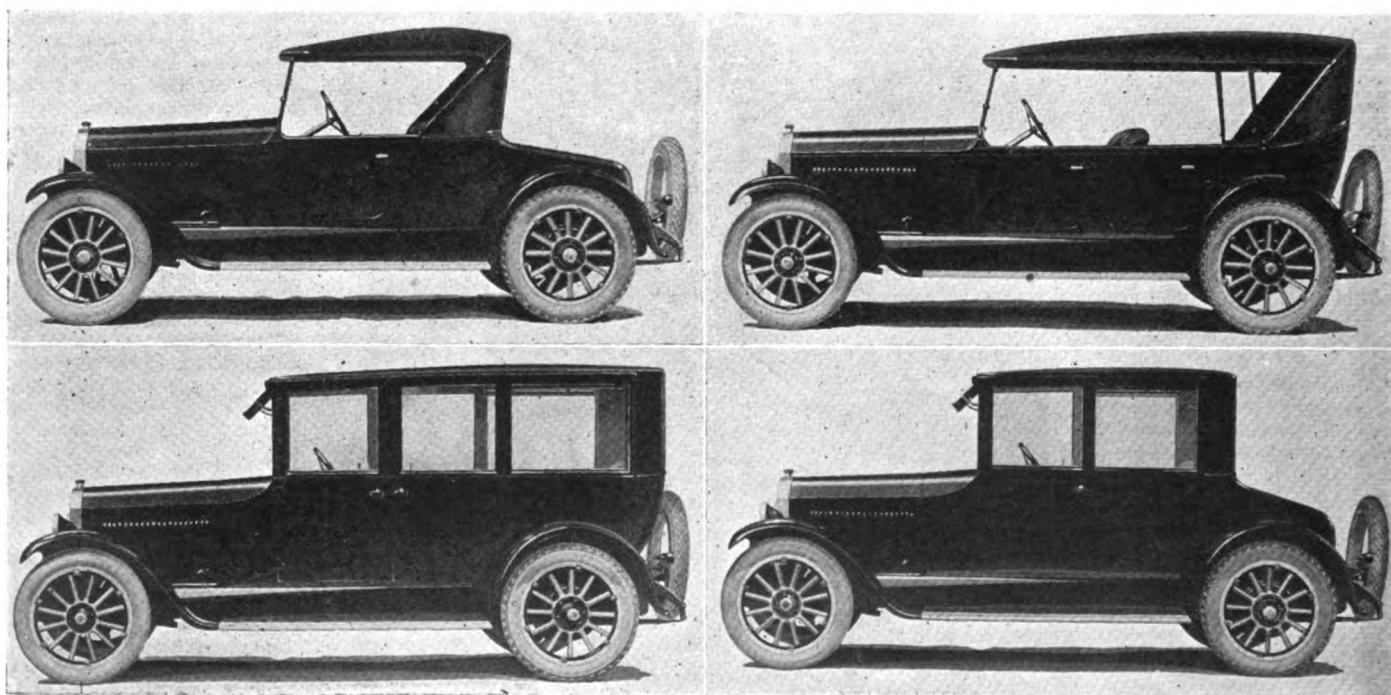
The car was designed with the idea of having a compromise between strength and lightness, being of such a weight as to provide economy and with sufficient strength in the parts to be of satisfactory proportions for ordinary road use. The car incorporates the Continental engine, this being the six-cylinder, $3\frac{1}{4}$ by $4\frac{1}{2}$ in. model 7-R unit. This engine delivers its power through a 10 in. Borg &

Beck single plate, disk clutch, two Peters universal joints and the new General Motors axle.

One of the features of the construction of the car is the chassis frame, which is 7 in. deep and so formed and reinforced as to prevent weaving and sagging strains. The springs are also of exceptional interest, being extra wide and long. The combined length of the springs is 184 in.; longer, it is claimed, than any other car of this length. Cord tires are furnished as regular equipment and the wheels are of the steel felloe, wood type.

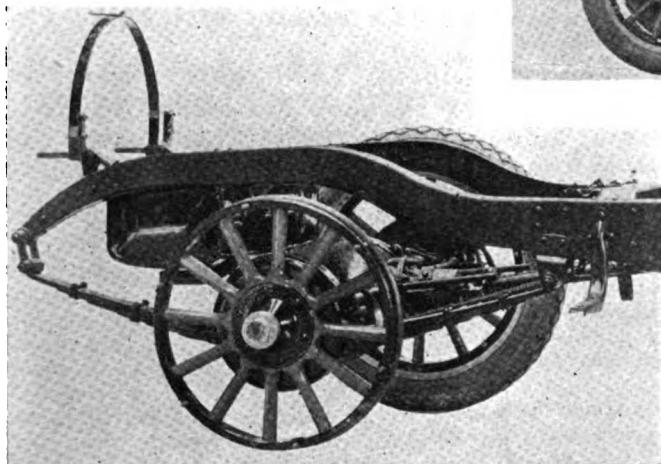
With a wheelbase of 115 in., this car is probably one of the lightest, if not the lightest product using the Continental 7-R engine. This engine is familiar to the trade and is a unit which develops more than 50 hp. on the block. It is of removable head and oil pan construction, the lower portion of the crankcase being aluminum heavily ribbed and reinforced. The engine has a four-bearing crankshaft $2\frac{1}{4}$ in. in diameter, a four-bearing

camshaft and inclosed valve mechanism; clutch and gasket are housed in unit powerplant style, the gasket being the new universal, three-speed selective type. The gasoline system comprises a 15 gal. tank at the rear end of the chassis, with the gasoline supplied to the engine by the Stewart vacuum system. The carburetor is a Stromberg, $1\frac{1}{4}$ in., with hot air connections. The cooling system is a pump circulating type, the radiator being a new, straight front design with a nicked shell. The radiator has a detachable core. The axles are General Motors products, the front axle being an I-beam forging, the spindles being fitted with New Departure ball bearings. The rear axle is a floating type with a single bearing and spiral bevel drive. It is mounted on Hyatt roller bearings in the hubs and differential and New Departure ball bearings on the pinion shaft. The brakes are internal and external, with a braking surface in excess of 250 sq. in.

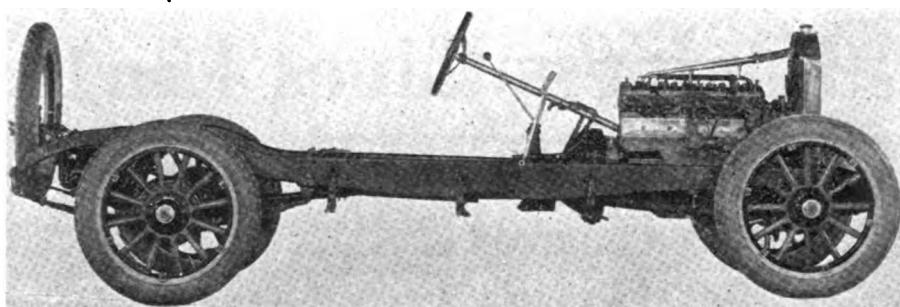


Bodies fitted to the new Scripps-Booth. The two upper views are the roadster and touring car and the lower views the sedan and coupe

One of the main features of the chassis is the spring suspension. This is semi-elliptic with bronze bushings in the springs. The front springs are 36 in. long and 2 in. wide. The rear, which are underslung, are 56 in. long and 2 in. wide. The frame is of pressed steel channel, the depth of the



The view above is the chassis of the new Scripps-Booth, which is using a Continental engine. The view to the left shows the rear construction and springing



frame being 7 in. and the width of the frame 2 in. The frame is drilled for snubbers.

The wheels are Kelsey artillery type with steel felloes, with wire wheels being provided at additional price. The tires are Goodyear cord, 32 by 4 in. ribbed front and non-skid rear. The rims are, of course, mounted.

The accessory equipment is complete, the chassis being lubricated by Alemite high pressure lubricating system and in addition there is a handy light for illuminating the engine at night.

There is a dial type of oil level indicator on the engine, hand grip release instead of a push button on the brake lever, spot light socket and glove box in the instrument board and the usual line of equipment, including speedometer, ammeter, adjustable head lamps and non-glare lenses.

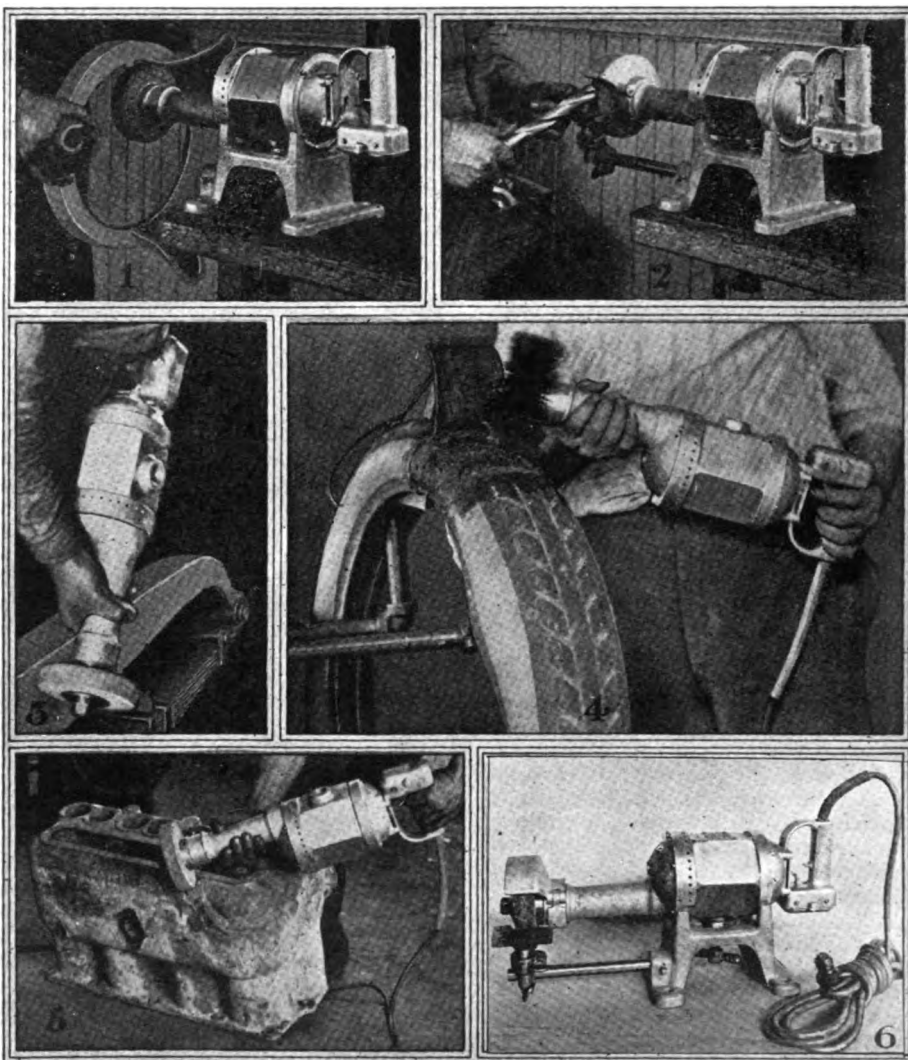
The finish is blue or maroon on the closed cars and dark Brewster green on the touring. The finish of the roadster is either dark blue or maroon. The open models are upholstered in genuine leather and the closed models in wool coach cloth.

Portable Electric Grinder

Primarily this tool has been designed for use as a portable grinder, but it is supplied with a quick detachable base and adjustable tool rest, so that it may be used with equal facility as a bench grinder. One fine and one coarse grinding wheel, both 5 x 1 in.; a wire brush wheel and a rag buffing wheel are included in the equipment. It is believed that this tool will take care of all the grinding, buffing or polishing jobs around

a garage or service station. It can also be used as a power unit for testing gen-

erators, magnetos and distributors by mounting a pulley on the shaft. Mechanically this grinder has several new and distinctive features, but follows, for the most part, approved grinding practice. It has grease lubrication throughout, forced air cooling, chrome nickel steel gears and shafts, and aluminum alloy housing. The entire mechanism is protected from dust. The motor is controlled by means of a trigger switch. The motor is rated at $\frac{1}{2}$ hp. and has a no-load speed of 3200 r.p.m. The net weight of the tool without the base is 21 lb. The manufacturer is the Black & Decker Mfg. Co., Towson Heights, Baltimore, Md.



Some of the varied uses of the Black & Decker portable electric grinder

Business Gives Lie to Pessimism

FAVORABLE OMENS BRIGHTEN HORIZON

Success of Lower Prices Emphasizes Need for Immediate Stabilization

NEW YORK, July 11—There are two outstanding facts about the status of the automotive industry as the middle of July approaches:

Business is considerably better than many persons within the industry think it is.

Business is very much better than people in general outside the industry think it is.

Governor Harding recently told the members of the National Automobile Chamber of Commerce that the worst thing about a pessimist was that he usually was pessimistic at the wrong time. That applies to a lot of men in the trade at this juncture.

The impression seems to be almost universal among those who have not followed the situation carefully that the automobile trade is suffering from a bad case of the doldrums. The Guaranty Trust Co., for example, the second biggest bank in the United States, in its survey of general conditions for June, has this to say:

"A decline in the demand for automobiles, accompanied by numerous recessions in prices, is reported. The slackening of demand is affecting both truck and passenger car output. About one-third of the companies actively engaged in the production of passenger automobiles in the United States have revised prices downward since April. The recessions in prices have been proportionately larger for the lower-priced cars than for those selling at higher prices.

"A reduction in the demand for automobile tires, corresponding in a measure to the lessened demand for automobiles, has affected the activity of a number of rubber companies. In accordance with curtailment of production schedules, workmen have been laid off.

Increases Exaggerated

"Earlier in the year there was a considerable increase of business in the automobile and tire industries, an increase which resulted in exaggerated expectations concerning the immediate future of these industries."

This summary could not have been much further from the actual facts in relation to June. There was a falling off in sales at retail the latter half of May, but it was not reflected in the factories. Sales in June were larger than for any month of the year thus far, and it was one of the largest Junes in history. There has been no reduction in demand

for tires and all the large factories increased their production schedules last month.

"Earlier in the year" there may have been some "exaggerated expectations" concerning the future, but they were not shared by well-informed men in the industry. On the contrary, actual conditions as they were warranted greater optimism than was felt in most quarters.

It undoubtedly is true that there would have been a sharp slump in sales if prices had not been cut. They were cut, however, and a flood of orders followed. This demonstrated beyond quibble that there is not a dearth of automobile buying power.

While it is certain there would have been a slump in sales if prices had not been reduced, it is equally certain that there will be a slump unless prices are stabilized in the very near future. No person to whom money is an object is going to buy an automobile unless he has some assurance that he can't get it

(Continued on page 38)

PRICES CUT, CHICAGO SHOWS SALES RALLY

CHICAGO, July 5—In all lines of cars which have reduced prices there was a decided improvement in sales for the month of June as compared with May and April. In many cases reports are to the effect that record sales are the result of June efforts. Automobile Row in Chicago appears to be busier than in months, and the atmosphere seems to have undergone a magic change.

The heaviest movement in cars is in from low to medium priced lines. A few high priced makes are moving slowly, but even in these rare spots business is reported better than was expected.

The sale of used cars has had a decided set back within the last two weeks. There is hardly a noticeable movement in trucks excepting for brisk inquiries for reimported machines. Sales in this class are not record breaking by any means. The tire business continues good and sales in accessories are improving rapidly.

Rotary Valve Developed

NEW YORK, July 13—Eugene Bournonville, the head of the Bournonville Welding Co., one of the pioneers in the development of welding, has invented a rotary valve engine and has manufactured about a half a dozen of these at a plant in Hoboken, N. J. It is understood that Bournonville will also manufacture a car in which this engine will be used, and the car will be known as the Rotarian. The company will manufacture under the name of the Bournonville Rotary Valve Motor Co.

OHIO REGISTERS CARS IN FIGHT ON THEFTS

About 7,000,000 Owners to Swear to Possession Rights—Tractors Excepted

TOLEDO, July 11—Nearly 7,000,000 Ohio automobile and truck owners will have to fill out blanks with affidavits to show that they rightfully own their machines, before August 17, when the Atwood bill, passed by the recent session of the State Legislature, goes into effect.

The new law is framed to check automobile thefts and after the initial registration all machines will be registered with the county authorities when sold and from then on will have to be registered whenever sold or changing hands, so as to preserve a clear title.

Only tractors are excepted from the working of the law. All other automotive vehicles are included.

The owner will have to fill out duplicate blanks, and in them he is required to give the name of the car, manufacturer, manufacturer's number, engine or motor number, horsepower, and a general description of the body of the car.

M. J. McCormick, secretary of the Toledo Automobile Club, has notified members that he will secure 50,000 blanks for motorists here. The penalty for not complying with the law is a fine of from \$25 to \$300.

Southern Jobbers Get Going

CHATTANOOGA, TENN., July 11—Following the meeting of the Southern Automotive Equipment Jobbers' Association in this city, members are putting into effect plans for stirring up a better volume of business in the Southern territory. A leading feature of these will be the movement to educate dealers in better business methods and how to increase profits through economies in operation.

Practically all of the manufacturers who have branch houses in Atlanta were represented at the meeting. Many good advertising pointers were advanced by the manufacturer representatives.

Edward H. Baughman of the Ozburn, Abston Co., was elected president, after having served the association for the past year as secretary. G. Norman Baughman of Tampa, Fla., president of the company bearing his name, was elected vice-president, and W. D. Alexander, Jr., president of the Alexander-Seewald Co., Atlanta, was elected secretary and treasurer.

The next meeting of the association will be held in Memphis in November.

Race Classic Rules Smaller Engines

PISTON DISPLACEMENT 122 INCHES FOR 1923

Indianapolis Initiates Economy Development Move—Present Maximum 183

INDIANAPOLIS, July 11—T. E. Myers, secretary and manager of the Indianapolis Motor Speedway Co., has announced that the 1923 race on the famous track would be for cars powered with engines having a maximum piston displacement of 122 cu. in. Translated into European terms this is two litres. The 1922 500-mile race, the tenth annual event, will be for three litre cars, or engines of 183 cu. in., the same size as the 1920 and 1921 races.

This is the fifth time that the Indianapolis track has reduced the engine sizes for the cars competing in the five-century, which is the classic of all the world's speed events annually. Off hand such reductions would seem to reduce the speed of the cars. Such is not the case. The automotive engineers have always been able to obtain more speed, in fact, by speeding up the engines and lengthening the stroke of the motor, which is to say that the diameter of the cylinders are reduced.

The 1923 race will have engines smaller than anything now built in America. The smallest engined car to-day in production is a four cylinder, measuring 143.1. The Ford engine is near the 183 maximum. Such reductions have always been reflected in the stock production of the American makers. The "crucible of racing" has proved to the satisfaction of the engineers that fuel economy could be effected by reducing the engine sizes. In the last race the average car's mileage was ten to the gallon. Two years hence it should pass the twelve mile mark.

The efficiency of the two litre engine was demonstrated recently in the French economy Grand Prix at LeMans, where De Dion Bouton, of this class, showed 49.09 miles to the gallon in a stock test.

Other than the announcement of the engine limitations, no specifications have been made public.

Van Wheel to Start Work

SYRACUSE, N. Y., July 12—The Van Wheel Corp. has been reorganized and is getting ready to go ahead in a much larger way. The new officers of the corporation consist of T. G. Meachem, president; J. W. Vanderveer, vice-president, and R. T. Wennstroom, treasurer.

The company makes a hollow spoke cast metal wheel for both trucks and passenger cars, and is the only firm in the field to-day building a metal wheel for light trucks.

FORD'S JUNE OUTPUT 108,962, NEW RECORD

DETROIT, July 9—The Ford Motor Co. set a new high record for monthly production with an output of 108,962 cars and trucks in June in the Detroit factory and 22 assembly plants throughout the country. Production has been increasing steadily since early spring and shows substantial gains over the same period last year.

The second quarter of this year shows an output of 301,796 against 220,878 for the same period last year, a net increase of 80,918.

Despite the fact that the plants have been running at maximum capacity, the demand for products is not being met, officials say, and there are many thousand unfilled orders ahead so that Ford sales are still limited by manufacturing facilities rather than marketing possibilities. This is true particularly with respect to closed cars, for which the demand is unusually heavy.

WILLYS DEALERS HEAR OPTIMISTIC MESSAGE

PHILADELPHIA, July 9—John N. Willys, president of the Willys-Overland Co., introduced by Harry B. Harper, president of the Overland Harper Co., addressed a meeting of Overland Harper dealers at the headquarters of the local company, Forty-second and Chestnut streets, bringing a message of optimism to the trade.

Among the things Willys said were: "Work is a great thing. It will accomplish anything. We have weathered the storm and now it is plain sailing ahead. We are back to the production of 400 cars a day and by next month we expect to increase this to 600 cars. Our organization is the best we ever had, and so are the shopmen."

"June was good," said H. B. Harper, "but it isn't a patch on what we are going to do in July. Our product is right, our prices are right, and this response of the buying public proves that better business, increased sales and a big future await us."

Build Youngstown Highway

YOUNGSTOWN, OHIO, July 9—Work has been started on one of the most difficult and important highway jobs in the State in the Wayne, Ashland and Knox counties. It will bring this city into closer touch with Columbus and Cincinnati, and the road will be an important link in the Lincoln Highway.

COMMERCIAL HAULERS WANT PARTS SERVICE

Condemn Opposition of Truck Assemblers to Establish- ment of Unit Service

MILWAUKEE, July 9—A resolution condemning the action of manufacturers of assembled trucks in opposing the establishment of parts service stations throughout the country by makers of unit parts was adopted by the National Association of Commercial Haulers at its annual convention which closed here today. The organization will do all it can to foster the service station idea.

Joseph X. Galvin, president of the National Team and Truck Owners Association, addressed the members and told them he had come to the convention to urge amalgamation between the two associations. A resolution favoring such action was adopted, but the actual working out of the details was left to the officers and executive committee.

F. J. Alvin, manager of the United States Motor Truck Co. of New York, which is headed by former Governor Alfred E. Smith, informed the convention that he had come to Milwaukee to pledge the assistance and support of his company to the association.

It was decided to separate the office of manager and secretary, both of which have been held by C. R. Collins of California. Collins will remain as manager while Tom Snyder of Indianapolis, who is secretary of the Indiana Transfer Men's Association, will become secretary of the national association.

One of the resolutions adopted favored passage of the Townsend highway bill now before Congress.

KEATON RUBBER PLANS DIRECT DEALER SUPPLY

SAN FRANCISCO, July 9—Managers of the several branches of the Keaton Tire & Rubber Co. on the Pacific Coast, met at the company's headquarters in San Francisco late in June for a conference at the call of R. H. Keaton, president of the company. The most important matter discussed was that of direct factory shipments in larger quantity to the individual dealer, without the delay of going through the hands of the distributor. It was announced at this meeting that the guarantee on Keaton non-skid cords would be raised to 10,000 miles, despite the fact that the price has been lowered to the level of standard makes of tires. Agents reported that the free tire and rim service given motorists at the Keaton branches and service stations had proved popular and was a success as a business getter.

TWO WAYS NOW OPEN TO BAR OUT TRUCKS

Permanent Tariff Provides Internal Tax Recovery— Graham Equalizes Values

WASHINGTON, July 12—Two measures to prevent reimportation of American-made trucks are now pending before Congress. Chairman Fordney of the House Ways and Means Committee says Section 317 of the permanent tariff bill fully covers this important issue. Congressman Graham of Illinois has a joint resolution before the Ways and Means Committee which would practically prohibit reimportations, and favorable action on the resolution is promised by Chairman Fordney as a means to expedite this legislation.

Section 317 of the tariff bill reads as follows:

"That upon the reimportation of articles once exported, of the growth, product or manufacture of the United States upon which no internal tax has been assessed or paid, or upon which such tax has been paid and refunded by allowance or drawback, there shall be levied, collected, and paid a duty equal to the tax imposed by the Internal Revenue laws upon such articles, except articles manufactured in bonded warehouses and exported pursuant to law, which shall be subject to the same rate of duty as if originally imported, but proof of the identity of such articles shall be made under general regulations to be prescribed by the Secretary of Treasury."

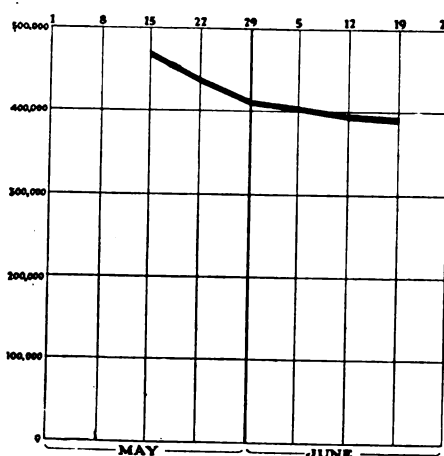
If this item is included in the permanent tariff when finally enacted it will put an end to underselling the American market by speculators who have purchased army trucks abroad at ridiculously low prices.

Because of delay incident to the debate on the tariff bill the Graham resolution may be rushed through the House and Senate. It provides for an assessment of 300 per cent on reimportation of war supplies, based on American valuations. This rate is sufficient to equalize prices in this country and halt the flood of remanufactured or altered trucks sold by the army agents which found their way to speculators.

Sell Tulsa Company Plant

TULSA, OKLA., July 9—The plant of the Tulsa Automobile Manufacturing Co. has been sold to D. M. Witt of Oklahoma City by R. M. McFarlin and his associates. Floyd Thompson, former sales manager of the company, will be interested with Witt and will be manager of the Witt-Thompson Motor Co., which will be the new name of the concern. The company has dealers in California, Oregon, Washington, Missouri, Colorado, Arkansas and Oklahoma and an export department in New York. The new company takes over all the assets of the old but none of its liabilities.

Idle Freight Car Record



The black line represents the record of idle freight cars throughout the United States. It is a business indicator of interest to all automotive men, and especially to truck dealers. When the railroads are busy carrying merchandise it follows that manufacturers and merchants are busy fulfilling the needs of customers. Between May 15 and June 19 the average net car surplusage has shrunk from 469,770 to 392,097, a decrease of 77,673. During the week of June 12-19 the surplusage was reduced 4,347.

TRACTOR INVASION STAGED ON COAST

TACOMA, WASH., July 11—The biggest demonstration tour of its kind in the West will be held in western Washington when a caravan of Fordson tractors will invade every county in western Washington.

The tour will be in the capable hands of W. H. Goodwin, assistant branch manager of the Seattle Ford assembly plant. Lieut. Gov. W. J. Coyle has been named as executive manager of the tour, which will take at least four weeks.

Because of the educational feature of the tour, the Washington State Agricultural College has taken a keen interest in the event, and will have as its representative on the trip, Dr. S. B. Nelson.

Swaps Business for Farm

DECATUR, ILL., July 9—E. R. Mickelberry of Champaign, owner of the Bradley Motor Co. of this city, which was sold last week to Charles S. Hurlburg, former State Senator of Galesburg, received 375 tons of barbed wire and a 275-acre farm near McLeansboro in payment for his business. The auto company was valued at \$80,000. Frank Armstrong has been named manager of the auto firm.

Coast Dealers to Attend Fair

BERKELEY, CAL., July 9—The majority of the automobile dealers of Berkeley will have exhibits in the Merchants' Fair to be held here in August. There will be 150 exhibits, all housed in a huge, specially constructed tent, covering a space equal to about four city blocks in area.

A. E. F. TRUCK AUCTION FAILS TO STIR BIDS

Only 90 of 200 Offered Put on Sale Owing to Light Buying Interest

NEW YORK, July 11—Lack of interest was the most striking feature of the three-day auction sale here of reconditioned American-made army trucks brought back from England by the Truck Co. of America. There was light bidding because of the small attendance, which did not exceed 50 the last day. Only 90 of the 200 trucks offered were put on sale.

General business conditions in the truck transportation field were blamed for the lack of demand. During normal times there would have been little hesitancy on the part of buyers. One man in attendance stated that while he considered the trucks good purchases, he could not afford to add to his fleet when many of his vehicles were already idle.

Though the vehicles were in good condition and considered bargains, those wishing to buy were reluctant to bid much above \$1,500 for any of the trucks. The sale included 5½-ton Macks, 5-ton Pierce-Arrows, 3½-ton Packards, 3-ton Whites, 4-ton Rikers, and 1½-ton Commerce.

Because of the light bidding, the auctioneer was forced many times to reject the bids. The last day \$900 was the highest bid for one of the Packards. While some of the trucks were said to have been sold for around \$2,500, the bidding was carried above the \$1,500 mark by representatives of the company.

In one particular instance, the auctioneer led the prospective buyers to believe that the trucks carried a manufacturer's guarantee. This was not so, the only guarantee being one against defective parts within 30 days of purchase.

It is stated that the Truck Co. of America is planning to auction off reconditioned passenger cars used in Europe during the war. No date has been set for this sale.

Goodrich Forms Subsidiary

NEW YORK, July 9—B. F. Goodrich Co. has completed the organization of a subsidiary, the International B. F. Goodrich Co., incorporated under the laws of New York, with an authorized capital of \$10,000,000, represented by 100,000 shares of \$100 par value common stock. The new company will represent B. F. Goodrich Co. in all foreign countries except Canada.

Safety Oiling Rights Sold

PHILADELPHIA, July 9—The manufacturing and patent rights to the safety oiling system have been purchased from Charles Kralicek & Co. of Cleveland by the Safety Oiling System, Inc., which has occupied its new building at 2303 Fairmount Avenue, this city. Preparations have been made to manufacture the device on a larger scale.

DENBY TO REFINANCE; ALL TRUCKS REDUCED

**Cuts Range from \$200 to \$700
—\$100,000 Bond Issue
Planned**

DETROIT, July 9—Creditors of the Denby Motor Truck Co., at a meeting yesterday, named a special committee of five, headed by J. H. Johnson, president of the Peninsular State Bank, to formulate plans for presentation July 12 for funding the company's indebtedness. C. A. Ailes, a member of the creditors' committee, which has been operating the plant for the last year, said that while the plant is free of all bonded indebtedness the plan in view is to ask creditors to accept part payment in bonds and the balance in stock in order that the company's statement may be put on a bankable basis. It also is proposed to issue bonds for about \$100,000 as class A bonds to furnish working capital.

In addition to Johnson, the committee is composed of J. M. Burns and B. J. Lincoln, Detroit attorneys, representing creditors; O. W. Myers, district credit manager of the Goodyear Tire & Rubber Co., and W. P. Fuller, of Fuller & Sons Co., Kalamazoo. The Denby company will continue in operation. It has debts of about \$650,000, but is solvent and assured of success if given opportunity to work out of its present difficulty, said Ailes.

Announcement was made by the Denby company to-day of price reductions effective immediately. The $\frac{3}{4}$ -ton and 1-ton speedster will sell for \$1,625; the $\frac{1}{2}$ -ton for \$2,300; the 2-ton for \$2,600; the 3-ton for \$3,300; the 4-ton for \$4,200; the 5-ton for \$4,850; and the 7-ton for \$5,500. This is a reduction of \$200 on the 2-ton, \$300 on the 3-ton, \$400 on the 4-ton, \$500 on the 5-ton, and \$700 on the 7-ton.

The light trucks are equipped with pneumatic tires and the others with solids. All models except the speedster are equipped with bumpers.

Case Makes \$400 to \$500 Cut

CHICAGO, July 9—Prices on Case motor cars have been reduced from \$400 to \$500 on all models. The touring and sport models have been reduced from \$2,650 to \$2,250, the coupé from \$3,400 to \$2,900, and the sedan from \$3,750 to \$3,285.

Rose Guarantees Prices

HASTINGS, NEB., July 9—The Frank Rose Manufacturing Co., manufacturers of Rose Specialties, has guaranteed its prices up to Jan. 1. Dealers have been informed that if manufacturing costs can be lowered all stock purchased after July 1 will be protected up to Jan. 1.

Mack Gives 90-Day Guarantee

NEW YORK, July 9—The International Motor Truck Corp., manufacturers of Mack trucks, has decided to give a

guarantee of 90 days to both dealers and purchasers against price reductions. No time limit has been set upon the period during which this guarantee will be given, but it can be revoked by the company at any time. The guarantees do not apply on sales in which a trade-in is involved.

Clydesdale Trucks Come Down

CLYDE, OHIO, July 9—Prices on Clydesdale trucks have been reduced on models from $\frac{1}{2}$ -ton to 5-ton. Model 42, $\frac{1}{2}$ -ton, is cut from \$2,750 to \$2,475; model 65, $\frac{2}{3}$ -ton, \$3,540 to \$3,250; model 65E, $\frac{2}{3}$ -ton, \$3,775 to \$3,450; $3\frac{1}{2}$ -ton, \$4,400 to \$4,100, and 5-ton, \$5,500 to \$4,500.

Vellie Gives Out New Prices

MOLINE, ILL., July 9—New prices are announced in various models made by the Vellie Motors Corp. The model 48 touring car is reduced from \$1,855 to \$1,595; the model 34 touring car from \$1,485 to \$1,385; the model 48 sedan from \$2,885 to \$2,485; the model 34 sedan from \$2,485 to \$2,085 and the model 34 roadster from \$1,485 to \$1,385.

Ford Makes Parts Reductions

DETROIT, July 9—Price reductions have been made by the Ford Motor Co. on all parts sold by the company. The reductions range from $12\frac{1}{2}$ to 50 per cent and cover more than 400 parts. In dollars and cents the reductions range from 1 cent on nuts and bolts to \$12 on transmission assemblies.

Champion Motors Cuts Prices

PHILADELPHIA, July 9—The Champion Motors Corp. announces reductions in the prices of its various models. The special touring car is reduced from \$1,595 to \$1,395; the Champion "tourist" from \$1,250 to \$1,095 and the commercial car to \$1,325.

Excelsior Cuts Cycle Prices

CHICAGO, July 9—The Excelsior Motor Manufacturing & Supply Co. announces new prices on Henderson and Excelsior motorcycles. The electric equipped Excelsior is reduced from \$480 to \$400 and the electric equipped 4-cylinder Henderson from \$585 to \$485.

Reduce Elcar Prices

ELKHART, IND., July 11—Elkhart Carriage & Motor Car Co., has reduced prices on all models of Elcar in announcing its 1922 line. In the open cars the De Luxe models are reduced from \$1,700 to \$1,595, the Standard models are priced at \$1,385, and the lighter models are reduced from \$1,300 to \$1,195. In the enclosed cars the 3-passenger coupé is reduced from \$2,500 to \$2,395 and the sedan from \$2,600 to \$2,495.

Coast Speedway to Open Soon

SAN FRANCISCO, July 9—Sunday, Aug. 14, has been selected as the date of the opening of the big speedway now under construction at Cotati, Cal.

SALES SHOW GAINS IN INDIANAPOLIS

**Nordyke and Marmon Plant
Has 30 Per Cent Increase
for June**

INDIANAPOLIS, July 9.—Automobile manufacturers here are beginning to compare June production with previous months. At the Nordyke & Marmon plant, A. J. Rodgers, sales manager, says the plant production in June was fully 30 per cent more than in May and April. Much of this increase, he believes to be due to a reduction of prices in May. The company is preparing for a gradual increase in production during the summer months.

C. A. Snyder, of the Cole Motor Car Co., which has just announced a decrease, is a little skeptical concerning the good that will be done. The company has had a fair production during the summer with an increase during June and its officials are rather frank in admitting that the cut in price was the result of the "price cutting habit." Up to the present time the Premier Motor Corp. has announced no cut in price and has resumed the production of cars. The production is not large, but sales are good, according to H. E. Doty, the new sales manager. Shipments are being made from the warehouse stocks and June has shown a good increase over the previous two months.

Officials of the National Motor Car & Vehicle Corp. say that sales during June will be considerably better than in the two previous months. With this company, as with the Premier, many shipments are being made from warehouses. Production during the month was about the same as during the two preceding months.

The general opinion among officials in plants where reductions have been made is that present prices will be maintained during the rest of the year, but no price guarantees.

Apperson Down \$250 to \$750

KOKOMO, IND., July 11—Reductions ranging from \$250 to \$750 have been made by the Apperson Bros. Automobile Co. on open cars in both its Standard and Anniversary models. The Standard 4-passenger is cut from \$3,500 to \$3,000, and the 7-passenger from \$3,500 to \$3,250. The Anniversary 4-passenger is reduced from \$4,250 to \$3,500, and the 7-passenger from \$4,250 to \$3,750.

To Name Batchelder Successor

NEW YORK, July 9—The executive committee of the American Automobile Association at a regular meeting at the Hotel Commodore to-day named a committee of three—George Diehl, president; David Jamison, past president, and Horace Donnell, treasurer—giving it authority to appoint a successor to A. G. Batchelder, the late executive secretary who was killed in an airplane accident near Langley Field.

GENERAL MOTORS SUES VER LINDEN ON LOAN

**Alleges Former Olds Head
Loaned Self \$490,000—
Action Involves Bonus**

DETROIT, July 8—Suit was filed in Federal Court here to-day by the General Motors Corp. against Edward Ver Linden, former president of the Olds Motor Works, to recover \$490,000 alleged to have been loaned to himself from Oldsmobile funds on deposit in Lansing, without the knowledge or consent of General Motors officials. Refusal of Ver Linden to return the money upon demand of General Motors officials when the loan was discovered resulted in Ver Linden's immediate dismissal, according to the petition filed in court.

Ver Linden said to-day he had heard of the court action but had nothing to say in regard to it. He is now supervising the construction at Lansing of the main plant of Durant Motors, Inc.

The petition says Ver Linden was employed as general manager of the Oldsmobile division under the usual written manager's contract providing for a salary plus a bonus on net earnings of the Olds division. The General Motors Corp. portion of the annual bonus was payable in stock of the parent corporation and held for a period of years in the custody of corporation in accordance with a written uniform plan.

It is alleged Ver Linden disputed deductions for depreciation in inventories and plants made by corporation accountants in order to reduce them to the market value, and also demanded, the petition says, that bonus shares of stock being held for him be delivered immediately although under the corporation plan, dividends during the period of retention of stock are paid to managers and employees whenever declared to other stockholders.

Writs of garnishment against any and all funds to the credit of Ver Linden in any Lansing bank were issued at the request of attorneys for General Motors. The suit resulted, it is alleged, from the action of Ver Linden as assistant treasurer, in countersigning a check on April 20. The check was drawn by Olds Motor Works division and payable to him against funds of the company in the City National Bank at Lansing for amount sued for. The check is said to have borne the notation "loan to Edward Ver Linden." The petition recites denial of the plaintiff that it had knowledge of or authorized Ver Linden to loan himself money for any such purpose or any other purpose.

Salt Lake Names Officers

SALT LAKE CITY, July 9—Twenty-eight passenger car and truck dealers and distributors in Salt Lake County, who are the strongest unit of the Intermountain Automotive Trades Association, have elected the following officers for the coming year: Fred Sharman, Sharman Automobile Co., chairman; H. B. Carlisle,

Carlisle Motor Co. of Murray, vice-chairman; M. D. Naylor of M. D. Naylor Co., E. B. Erwin of Chevrolet Motor Co., C. A. Shepherd of Shepherd-Mitchell Car Co., executive committee.

The new officers are outlining a program of activities for the next twelve months which should be of great interest to the members and which gives promise of creating many activities. An enclosed car week, an economy run, and an annual automobile show are some of the main activities that will soon receive attention.

HORIZON INDICATES BUSINESS REVIVAL

(Continued from page 34)

\$150 or \$200 cheaper a month from now.

Two well-known companies in the same class have cut their prices twice in a month. The first company to reduce felt an immediate stimulus in its business. The sales of the second stopped. Then the second company cut, but still sales didn't start, and it made a second cut. Then the sales of the first company slowed up and it made a second cut.

There were many reasons why automobile prices should have been cut, but there is every reason in the world why they should not be cut every two weeks. Such a price war would be ruinous. It would do more than anything else to check sales. When a man buys even a pair of shoes, and then finds that he could have bought them \$1 or \$2 cheaper a week later, he instinctively feels that some one has made a fool of him, and this engenders a certain amount of animosity toward the maker or dealer. If he loses \$100 or \$200 in another kind of purchase his disgust is multiplied accordingly.

Chance to Study Needs

Dog days usually are dull in a business way, but this year they will afford the tired business man and manufacturer an excellent opportunity to scan the industrial horizon and figure out intelligently what's going to happen two or three months from now.

The signs are on the horizon now and it doesn't require superhuman intelligence to read them. The favorable omens greatly outnumber the portents of evil. The fundamentals upon which business and trade rest are stronger than they have been in eighteen months. They point to a gradual but none the less certain business revival in September or October at latest.

There was foolish optimism a year ago and there is needless pessimism now.

Speak at Tri-City Meeting

ROCK ISLAND, ILL., July 9—F. C. Zillman, secretary and manager of the Illinois Automotive Trades Association, and P. F. Drury, assistant general manager of the National Automobile Dealers Association, were speakers at a gathering of the Tri-City Auto Trades Association.

COAST BUYING JUMPS WHEN PRICES RECEDE

Quick Action Surprises Dealers Who Looked for Gradual Gains in Sales

SAN FRANCISCO, July 11—The rapid recovery of the automotive industry on the Pacific Coast and the steady return to normal, were well illustrated at the end of June by figures issued by the State Motor Vehicle Department. These figures show that California buyers have registered just 1000 more automobiles per day during the first four months of 1921 than they did during the corresponding period of last year. These figures cover the entire State, but San Francisco dealers also declare that approximately the same proportion of increase holds good for Nevada and Arizona.

Conditions in the automotive industry in the East Bay section—Alameda, Oakland, Emeryville and Berkeley—are reported good by Manager Wert of the Oakland office of R. G. Dun & Co., in his summary for the closing week in June, in which he said:

"Market conditions affecting retail sales of automobiles have fluctuated considerably in the past month. Some cars have had an unusual sale, while others have been slow. At present, sales are a little more active, due to recent price reductions. As a whole, conditions in the retail automobile field are quite satisfactory, and all the dealers seem to hold an optimistic air."

Some of the individual statements of sales and conditions, made in good faith by the dealers, show that Wert is too conservative. According to agents of the Franklin Automobile Co., sales for the first six days of June exceeded those of the corresponding period in May by rather more than 100 per cent.

David Aronson, San Francisco Scripps-Booth and H. C. S. dealer, said June sales had exceeded his expectations. "When the new prices were announced," said Aronson, "I did not expect an immediate increase in sales. I believed that the automobile business would build up gradually with the general return to normal, but instead the increases in sales came suddenly, beginning almost as soon as the price reductions were announced."

This seems to be the general opinion of the dealers in San Francisco, Alameda, Oakland, Emeryville and Berkeley.

New Trades Body at Coast

RED BLUFF, CAL., July 9—The Tehama County Auto Trades Association has been organized here with H. H. Wright of Red Bluff as president. Other officers are: Vice-president, Miles G. Ramer of Corning and Harry Huber of Red Bluff; treasurer, Jobe Lukens, Red Bluff; secretary-manager, George Wahl, Red Bluff. Nearly every city and town in the county is represented in the membership, and the meetings are to alternate between Red Bluff, the county seat, and Corning, the second city in size in the county.

FRANKLIN COMPANY MAKES TWO RECORDS

New High Figures Reached in Shipments and Sales on Anniversary

SYRACUSE, July 9—Three leading events in the history of the Franklin Automobile Co. were celebrated this week—two of them records for shipments and sales, established on the same day, June 30, and the third, the twentieth anniversary of the company, July 1.

The Franklin company shipped 138 cars Thursday, the biggest shipment for one day it ever made. The last previous record was made on December 31, when 110 cars were shipped.

On the same day Franklin dealers throughout the country sold 132 cars, which establishes a record, and helped make the company's business for the month the largest for June in its history. Last year was considered a banner year for car orders, but four more cars were shipped last month than in June, 1920, the total being 1031.

In celebration of the anniversary the company officials and employees held a parade, headed by the Franklin Band of 33 pieces. A feature of the procession was the first Franklin car ever sold, run on its own power. In this car rode a man and woman dressed in the styles of twenty years ago. John Wilkinson, who built the car, rode just behind it in a 1921 Franklin sedan.

In 1901 Mr. Wilkinson, who is now vice-president and consulting engineer of the Franklin company, started work for H. H. Franklin and A. D. Brown, now of the Brown-Lipe-Chapin Co., under the name of Brown & Franklin Co. The first car was turned out March 3 of the following year. This car had four elliptic springs, a wooden frame instead of steel, and an air-cooled engine, features which have endured in Franklin cars right through to the 1921 models.

Thirteen cars were turned out in 1908, of which eleven were sold. Sixty-five persons were employed the first year, and in the twenty years since then the force of employees has grown to 3200. The plant now includes eighteen buildings, with thirty-four acres of floor space.

REO WORKERS ENJOYING TWO WEEKS' VACATION

LANSING, MICH., July 9—All departments of the Reo Motor Car Co. except the service and repair closed today for two weeks. The simultaneous vacation plan has been under consideration for some time. Opposition to the plan was overcome by the argument that present business conditions made the opportunity for trying it out most propitious. H. C. Teel, general superintendent and an ardent advocate of the plan, said it was the intention to drop all work wherever possible even in the

repair and service departments and take two weeks' rest in the hope of eradicating all feeling of apprehension regarding market conditions. The example of Reo may be followed by several other plants in Michigan though no formal announcements have been made as to closing.

DODGE WILL CONTINUE 600 AS DAILY OUTPUT

DETROIT, July 9.—The announcement to-day by the Dodge Bros. Motor Car Co., through President Haynes that production would be maintained at capacity for the remainder of the year comes as a reassuring factor in the present unsettled condition of the market. Production at the Dodge plant since the price cut has been increasing daily and is now around the 600 mark. That output, Haynes said, will be continued throughout the year. This assertion is based on present orders and prospective demands.

Haynes said dealers' stocks were exhausted and that cars rapidly are going into the hands of consumers. The factory is far behind on orders and dealers from all sections of the country report prospects for a steady demand throughout the year.

A. C. HOPPE TAKES OVER KISSEL IN MILWAUKEE

MILWAUKEE, July 9—The Kissel Kar Co. of Milwaukee, a large territorial distributor of Kissel passenger and commercial cars, has been reorganized following the acquisition of the major interest by Adolph C. Hoppe, for fifteen years connected with the dealer trade in Wisconsin. He becomes president and general manager. Frank J. Edwards, who established the business, is now devoting his entire time to the Edwards Motor Car Co., Dodge distributor, and other extensive commercial enterprises. Hoppe formerly was a member of the Hoppe-Hatter Motor Co., Buick dealer. His new organization embraces the following department heads: Sales manager, H. J. C. Henderson, formerly Velie distributor; district manager, A. S. Hatch and J. M. Herschleb; retail manager, Edward LaPine; service manager, Frank Bennett; parts department manager, John Lindner.

Try Co-operative Trade Plan

INDIANAPOLIS, July 9—The Howard County Automotive Trade Association is trying out the co-operative plan in selling used cars. Three days this week all the used cars held by dealers in the organization were taken to a central location in Kokomo and put on display, with one man from each individual office in charge of the sales. The public generally fell in for the idea and instead of shopping around the various salesrooms, were able to look them all over at once. Special lights were used at night. The machines were parked under a large tent.

DRIVE SENDS WILLYS OVER SALES RECORD

Toledo Plant Goes 37 Cars Beyond Schedule for Month of June

TOLEDO, July 9—With a big drive through to the last day of June, the Willys-Overland plant here went 37 cars over its schedule for the month for a total production of 8537 cars for the month.

On June 2 the schedule was fixed at 3500, but the increased volume of sales caused this to be boosted to 8500 for the month.

Purchasing agents, production men and others struggled through the hot weather to "come through," and the record was made.

The July production will be increased 50 per cent, and according to appearances August will be a busy month at the plant.

Some departments at the factory here have been forced to put on three eight-hour shifts this month.

The big month was the first real test of the new production system put into effect by Vice-Presidents Walter Chrysler and Charles B. Wilson.

While motor officials here do not look for a great slump in the automotive field for this winter, the officials of the Social Service Federation, who went through their hardest winter for unemployment last year, are looking forward to similar conditions.

Arthur Guild, head of the organization which cares for all unemployed in this city, returned from a recent national meeting of officials holding welfare positions in all cities of the country, declared that precautions are now being taken to prevent a recurrence of unemployment of last year.

He said that reports indicated that Toledo, Detroit and Akron—the great automotive cities—were hardest hit. He pointed out, however, that they had come back most rapidly too.

The automobile experts, however, believe that the great demand for cars this year will make it possible to secure finance to manufacture during the winter for the needs of next summer.

Iowa Men Have Annual Meeting

BURLINGTON, IOWA, July 9—Dealers of Des Moines, Lee, Henry and Louisa counties got together here last Friday, the occasion being the annual meeting of the Des Moines County Motor Trades Bureau. President H. J. Lytle and Secretary A. K. Knapp of the Iowa Motor Trades Bureau were the principal speakers. At the annual election of the Des Moines County Bureau, held in connection with the meeting, B. F. Forbes was made president, J. F. Skerik, vice-president, and J. W. Wentworth, secretary-treasurer. The Des Moines County Bureau will hold its annual fall show in connection with the Tri-County fair at Burlington in September.

CAROLINA OPPOSES MANUFACTURER TAX

Association Advises Payment Under Protest—State Holds Back Collections

CHARLOTTE, N. C., July 11—Court hearings on the question of the legality of the collection by the State of the manufacturers' tax from automobile manufacturers and distributors is likely to follow the recent ruling of the State's Attorney General, who holds that North Carolina can continue to levy the tax, collecting the same amount, \$500, from State manufacturers as from outside manufacturers.

Determination to test the ruling has been expressed by local distributors. The Carolinas Automotive Trade Association is opposed to the payment of the tax, and W. M. Jones, executive secretary, has sent letters to dealers in the State setting forth the position of the association and advising them that if they pay the tax to do so under protest pending final decision.

Treasurer Asks Payment

RALEIGH, N. C., July 9—While attorneys are advising one or another of the 92 automobile manufacturers liable for the \$500 tax recently invalidated by the United States Supreme Court not to pay this tribute, State Treasurer Lacy is sending out letters calling for the payment of this State tax, and there is another North Carolina-Federal conflict.

Treasurer Lacy is proceeding under the advice of Attorney General Manning, who reads the highest court's opinion as no bar to the recovery of the tax imposed upon these outside manufacturers. Judge Manning thinks that the Supreme Court merely invalidated the discriminatory section and makes all manufacturers equal.

The Attorney General gives two reasons why the treasurer is not compelled to return the taxes collected under the acts of 1917 and 1919. Taxes paid under a mutual mistake of the law by payer and the collecting officer are not recoverable, he holds, because no action lies to recover money voluntarily paid. Then a suit against the treasurer under these circumstances is a suit against the State, which, of course, cannot be maintained.

To Regulate Fuel Stations

NEW ORLEANS, July 9—Regulations for the restriction in the locating of gasoline and lubricating oil stations in the city of New Orleans are proposed in an ordinance introduced in the city council by the Commissioner of Public Utilities. Under its terms, effective Jan. 1, 1922, a majority of property holders in the vicinity of any proposed oil station can stop, by filing proper protest, the erection and operation of that station. The city license under the terms of the ordinance would be reduced from \$37.50 to \$25 per annum, but a bond of \$100 must be filed with the city.

CORN 3 FEET HIGH, TRACTOR WORKS ON

INDIANAPOLIS, July 9—Tractor men in Indianapolis are very much interested in a test field of corn just south of the city. The owner of the field is attempting to cultivate the entire crop with motive power. Tractors were used to break the ground to prepare the soil for planting and for cultivation up to the present time. Yesterday, with the corn three feet high a tractor was used to draw the twelve-shovel, two-row cultivator. The corn sprang up behind the power machinery unharmed.

HORSES STILL WORKING ON FARGO FARM TESTS

FARGO, N. D., July 11.—The national demonstration and show committee of the National Implement and Vehicle Association has issued the following statement in regard to the tractor and horse contest staged here.

"Data secured in connection with the Fargo farming demonstration will not be complete until the horse outfits have finished their work and the records of all tractors and horses have been carefully checked. No information on this subject will be given out until July 11 on which date the national committee will meet again in Chicago.

"Results of the Fargo demonstration will be discussed at that time with a view to deciding future demonstrations. Information and the data regarding the Fargo demonstration will be made public."

Tractor Show on Long Island

FARMINGDALE, L. I., July 9—A demonstration of farm power operating machinery will be given in this town on July 14 and 15 by the Farm Implement and Farm Power Machinery Development Association, cooperating with the State Institute of Applied Agriculture. The demonstration will include plowing, cultivating, planting, harrowing, threshing, wood sawing, hauling and road grading. There will be about 25 tractors in operation, varying in size from 1½ up to 45 hp. Several farmlight plants and water systems as well as a number of stationary engines will also be exhibited.

Races for Farm Congress

NEW ORLEANS, July 11—Automobile races will be one of the features of the Interstate Farm Congress to be held in New Orleans, Sept. 12 to 18. The famous "Fair Grounds" will be used if present plans of the Motor League of Louisiana do not miscarry. Only amateurs will be entered. Entries must be filed with the motor league. It is expected that many cars from the small towns of Louisiana and Mississippi, and possibly some from Alabama, will take part.

PRICE CUTS A BOON TO SOUTHERN TRADE

Much Activity in June Marts Shows Buying Attitude— Cash Sales Fewer

BIRMINGHAM, ALA., July 12—With the renewal of activity in the lumber business and all other building material businesses in Birmingham, the sales of trucks have shown a marked increase, according to automobile dealers.

The demand for new trucks has greatly increased during the month of June so rapidly that all orders placed by local building material dealers could not be filled on schedule time. Many of the most urgent buyers were compelled to wait for delayed shipments to get their new equipment.

"Dealers who are members of the organization are very optimistic over the outlook for the coming year in the automobile business," said James P. Dobbins, secretary of the Birmingham Automobile Club. "They are anticipating a banner sales year for new cars. Business was light for a time, but the automobile line is picking up now. All previous records for sales were broken by the Birmingham Motors Co. during the month of June, when the company sold 82 cars, two-thirds of which were 1922 model Buicks. The others were used cars."

"I attribute the heavy sales to the drop in the price of Buicks, effective June 1, and the fact that so many people have been holding off waiting for the price on the medium-priced cars to come down," said Donald Drennen, president of the company.

"Our sales record is just a slight enlargement on the condition that prevails throughout the city. Automobile dealers are feeling the return to normal for the first time in six months and, while for most of them the sales have not been anything like they were, previous to the depression, they have during the past month showed a marked improvement.

"Cash settlements for expensive cars are not nearly so numerous in the new business spurt as they were before the depression, but the purchasers are of the substantial, dependable class, whose trade is as good as cash."

Sheet Makers Form Group

NEW YORK, July 9—The Sheet Metal Manufacturers Association decided at a meeting in Detroit last week to dissolve and continue its work as a group of the Motor and Accessory Manufacturers Association. It will be the first of many similar groups to be formed within the M. A. M. A., and the decision to dissolve will be followed by several other organizations of manufacturers engaged in the same line. The first group contains some of the leading sheet metal workers in the United States who do an automobile business.

OHIO SALES SWELL AS PRICES GO DOWN

Business in and Around Columbus Shows Greater Volume —Prospects Good

COLUMBUS, July 9—There is quite a noticeable increase in sales with the passenger car dealers of Columbus and central Ohio since the price readjustments have taken place. Apparently the public was waiting for the reductions in price and with the announcements late in May and early in June, buying which had been held up for some time was started anew. As a result, nearly all of the local agents and jobbers have been having a much better volume of business with prospects for the remainder of the summer extremely good.

It is the consensus that things will gradually improve in this section. The unemployment situation is not as bad as formerly, and more of the factories are in operation. In some cases the output of manufacturing establishments has been increased, and the financial as well as the business depression is being relieved to a certain degree. In fact, the city of Columbus was not nearly as bad hit as a number of other places, which is shown by the fact that automobile dealers have been doing a fairly good business even before the price readjustments.

The worst feature of the trade is the slowness still shown in the farming communities. Farmers are not having a good season, as far as the wheat crop is concerned, which together with low prices is curtailing their purchasing power. This is shown in the less number of orders received for automobiles, principally passenger cars. The truck business in farming communities has suffered from the same cause.

Truck dealers are still having a slow business and little improvement is expected for the time being. Mercantile establishments are not disposed to increase their business equipment under existing conditions, and consequently they are playing a waiting game, as far as the purchase of trucks is concerned. Commission men and wholesale grocers are probably the best prospects at this time, and some trucks are being absorbed in those lines of industry. Haulage firms have sufficient equipment when the shrinkage in business is considered, and they are not in the market to any extent. With the revival of business which is confidently expected in the fall, a better demand for trucks is anticipated.

Lathrop Seeks City Job

NEW LONDON, July 9—Nomination petition for the candidacy of Thornton N. M. Lathrop, president of the New London Automobile Dealers' Association and prime mover in the two automotive exhibits here, to the council of seven, which will be the municipal administrative body under the recently adopted council-manager form of government, is being circulated.

DETROIT PRODUCTION 169,041 FOR JUNE

DETROIT, July 8—Evidence of a steady upward trend in automobile demand, influenced in great measure by price cuts is shown by increased production for June in Michigan factories. The output totaled 169,041, an increase of 24,440 compared with May. Production of 108,962 by Ford against Ford output of 101,897 in May is responsible for a third of the increase but there was a step up in nearly all factories, particularly Dodge and Buick. Increases in output of Hudson-Essex, Maxwell, Paige, Packard, Studebaker, Chevrolet, Hupp and Olds also were marked and slight improvement was shown in practically every factory in the district. Olds Motor Works turned out 3100 in June against 1775 in May.

HOLD TWO IMPORTANT MEETINGS ON COAST

SAN FRANCISCO, July 9—Two important conferences of coast dealers were held here the last week in June. One was a 100 per cent meeting of all the Nash dealers from northern California and Nevada, called by Harold C. Hart, vice-president and general manager of the Pacific Nash Motor Co. Discussion continued all day, and was based largely on Mr. Hart's delivery of a message from Charles W. Nash, given him by the latter on the occasion of Mr. Hart's visit to the Kenosha factory, from which he has just returned. Every one of the dealers reported business better than expected in all sections of both States.

The other meeting was the semi-annual sales conference of the Chevrolet Motor Co. of California, which occupied two days, immediately following the return of R. H. Mulch, sales manager, from Detroit. All attaches of the sales department were in attendance.

Toledo Adopts Constitution

TOLEDO, July 11—The Toledo Automotive Trades Association at its meeting this week adopted a new constitution and regulations for the organization. The dealers' association was formed last fall and has been instrumental in governing the sale of used cars.

Charles Doan, Studebaker distributor, has been serving as president the first term, and Ray Skinner is the permanent executive secretary.

St. Louis Installs Officers

ST. LOUIS, July 11—The St. Louis Motor Trade Association installed officers at its dinner and meeting at Forest Park Highlands. The officers installed are G. G. Giese, Elastic Tire Cushion Co., president; E. A. Kansteiner, Sligo Iron Store Co., vice-president; A. R. Baxter, treasurer, and Robert E. Lee, secretary of the Automobile Dealers and Manufacturers Association, secretary.

BUSINESS PICKS UP IN DES MOINES FIELD

Improvement, However, Does Not Show Buying in Rural Iowa Districts

DES MOINES, July 9—After four days survey of business conditions in southeastern Iowa, H. J. Lytle and A. J. Knapp, president and secretary, respectively, of the Iowa Motor Trades Bureau, report that the past month has seen a decided improvement in conditions among the motor car dealers of that section of the State. The two bureau officials held dealer meetings in Centerville, Albia, Ottumwa, Fairfield and Burlington, and spent their days in interviewing individual dealers.

Dealers in all of the above towns report that there has been a decided upturn, only a part of which is attributed to price cuts. In the main, however, the improvement has not extended to sales among farmers, as the farmer has not as yet returned to the market. During the past month, however, prices of grain have shown an appreciable gain and it is thought that if this continues it will result favorably on farmer sales.

The optimistic dealer reports tally with the personal experiences of Mr. Lytle, whose firm, the Burlington-Overland Co., is a large distributor in that section of the State. Up to June 25, the business of the Burlington-Overland Co. has surpassed any June business during the past five years.

PLAN DES MOINES SHOW FOR END OF NEXT MONTH

DES MOINES, IOWA, July 9—Des Moines dealers will hold their annual early fall show in connection with the Iowa State fair in Des Moines the last week in August. While the show is held under the auspices of the State fair board, the Des Moines Dealers' Association has always given its hearty cooperation and C. G. Van Vliet, one of the managers of the winter show, manages the fair show. The show will occupy three-fifths of the space in the big machinery hall at the fair grounds.

Colonel Clifton Plays Host

BUFFALO, July 13—The July meeting of the directors of the National Automobile Chamber of Commerce is being held here to-day. Ever since Colonel C. G. Clifton of the Pierce-Arrow Motor Car Co. became president of the Chamber, it has been the custom to hold one meeting a year here at which he is the host for his fellow directors. The third of the series of meetings between committees representing the N. A. C. C. and the National Automobile Dealers Assn. was held here yesterday. Further progress was made in the direction of ironing out differences of opinion which have arisen between the two branches of the industry.

ASSOCIATION ACTIVITIES

Philadelphia Has Perfect Day

PHILADELPHIA, July 9—On an afternoon as perfect as though made to order, the Motor Truck Association of Philadelphia held its annual outing at Kugler's Mohican Club, on the Delaware, with the Camden Automobile Trade Association, the Philadelphia Automobile Trade Association and the Automobile Accessories Business Association as guests. About a score of automobiles, representing as many makes of car, left the quarters of the Philadelphia Automobile Trade Association, headed by the outing committee, whose car was followed by a motor truck carrying the Moose Fife and Drum Corps.

At Camden, the members of the Camden Automobile Trade Association met the motorists and escorted them to the wooded fastnesses of Kugler's, where a tempting mess of shad, nailed to planks on the lawn under the trees, already was sending out a savory smell from being smoked from the central wood fire. Somewhere around two hundred members and guests then formed into groups in the shade and indulged in various games, such as Red Dog and quoits, until the baseball game between the Camden team and a team from the Motor Truck Association of Philadelphia was ready to begin. Meantime, Committeemen Metcalf, Bosworth and others, and Artie Bittong, chairman of the entertainment committee, arranged for the comfort of the members and guests. There was a large gathering on the athletic field when the ball game began.

The game was a hummer from the start and full of exciting crises, as Ward, heavyweight first baseman of the Camden nine asserted after he had substituted a ball from his pocket for the thrown one which he muffed and was too tired to chase. The score was tied in the fifth and seventh innings, but Camden made a strong rally in the eighth, winning the game by the score of 13 to 8.

The batteries were: Camden, Myers and Mulligan; Philadelphia, Moore and Brown. Morningstar, Philadelphia's first baseman, relieved Moore in the box in the ninth, Moore going to first sack. Bittong umpired, and let everyone know it.

After the ball game there was more quoits, President Walter Y. Anthony and Tommy Quirk distinguishing themselves; African golf; top-spinning, and then that planked shad dinner, at which singing was a feature. The outing is the last function of the association until September.

Memphis Aids Traffic Bureau

MEMPHIS, July 11—Members of the Memphis Automobile Dealers' Association are co-operating with the traffic bureau of the police department in an effort to reduce to a minimum violations of the city traffic ordinances and the

"rules of the road." The members have pledged themselves to observe strictly the fundamental laws of traffic regulations and have instructed their employees to do likewise.

In a lengthy statement issued yesterday by Henry W. Osoinach, secretary of the association, attention of the members is called to criticism of local automobile dealers for their infractions of the traffic regulations. "A man or woman driving on a public thoroughfare who does not observe the rules of the road is a menace to other motorists, and not only risks his or her own life, but endangers the lives of even the careful drivers," says the statement.

Osoinach received a letter from V. Lucarini, police lieutenant, in charge of the traffic squad, a few days ago, thanking the association for the effective aid it is giving the department in the enforcement of traffic regulations.

Motor Trades Aids Shriners

DES MOINES, July 9—How a motor trades organization can play an important part in civic activities was well shown by the work of the Motor Trades Bureau of the Des Moines Chamber of Commerce during the annual Shrine conclave which was held in Des Moines June 13, 14 and 15. About 70,000 visitors from every section of the country were in Des Moines during the conclave, it being the largest convention Des Moines has ever entertained.

In brief, here is what the Motor Trades Bureau did for the Shriners:

Secretary James Bowie spent all of his time from June 10 to 15 in the conclave automobile headquarters.

Mr. Foster, a member of the bureau, called every owner of a car who had donated its use, every morning and checked all cars in and out.

Dealers furnished twenty-four cars, specially painted and decorated for the use of members of the Imperial Divan.

Dealers co-operating with private owners donated the use of 1250 cars for entertainment of the visitors.

Truck dealers donated the use of 100 trucks for hauling bands, patrols and their equipment.

Seventy-nine thousand three hundred people were carried in three days by donated cars.

Seven thousand five hundred women attended the reception at the Chamberlain Home, and not one walked.

Seek 14-Ton Maximum in Ohio

CLEVELAND, July 9—State Senator J. F. Burke of Elyria gave his pledge to the Cleveland Automotive Trade Association at a meeting in Hotel Winton that he would lead a fight at the next session of the Ohio General Assembly to restore to Ohio highways the 14-ton maximum of truck and load combined.

Senator George H. Bender of this city

also promised to give his aid to the movement, as did E. J. Shover, secretary of the State association.

The action in this city is the opening gun of a battle that will be waged against the bill by all automobile trade associations in the State under the leadership of the State body.

S. E. Williams, the secretary of the Cleveland body, introduced 100 new members, and they were given a hearty welcome. An invitation from Senator Burke to the local body to go to Lorain and organize the Lorain County Automotive Trade Association was accepted. A committee from this city will visit Lorain on Friday, July 8, to install officers.

The Cleveland organization has, on the invitation of city officials in charge of Cleveland's 125th anniversary celebration, arranged a pageant designed to show the progress that has been made in transportation.

The exhibits will range from methods used in the days of the Indians, down through the stage coach, steam railroad, motor vehicle and airplane eras. Automobile dealers who are members of the association have been asked to assemble their first models put on the market and then by way of comparison have in the parade their 1921 cars. The pageant has a place of honor on the program for July 22, and it is regarded as one of the big features of the celebration, which lasts two weeks.

Manufacturers of cars and parts also are participating.

Postpone Carolina Meeting

COLUMBIA, S. C., July 11—The semi-annual meeting of the South Carolina Automotive Trades Association, which was to have been held at Greenville on July 20, has been postponed until December. Announcement to this effect was made by A. Mason Gibbes, president of the association, who said that the association's directors had taken this step after a very careful survey of conditions surrounding the automotive trade at this time.

"While there has been some improvement in conditions," Gibbes said, "this improvement has not been so marked that we would feel like taking the dealers away from home at this time. We hope to make our December meeting the biggest that has yet been held." While calling off the meeting at this time, Gibbes feels that the crisis in the industry is passed and that business is again on the up-grade.

Industry Holds Golf Outing

PHILADELPHIA, July 9—The automobile industry here enjoyed a big golf outing at the North Hills Country Club, through the courtesy of the Philadelphia Automobile Trade Association. The events included an approaching and putting contest; a driving contest, and several handicap events divided into classes. The committee comprised Louis C. Block, W. H. Metcalf, J. C. Schwartz, W. G. Herbert, W. Y. Anthony, J. G. Roberts, W. R. Walton and H. P. Schade.

CHANGES IN THE TRADE

Hanauer Automobile Co. has been appointed distributor of the Lincoln car in Cincinnati.

C. A. Kintz, pioneer automobile man, has taken the agency for the Elgin line in Tacoma, Wash.

Pacific Nash Motor Co., San Francisco, has been awarded the Lafayette franchise for northern California and Nevada.

Eaton McMillan has been appointed sales manager of the Howard Automobile Co., Buick distributors in San Francisco.

P. L. Emerson, assistant sales manager of the Reo, has been transferred to San Francisco, where he will take charge of the Reo branch.

R. R. Matthews of Tacoma, head of the Willard battery depot, has been re-elected president of Washington Automotive Trades Association.

John Nicol, veteran Chicago distributor for Federal trucks, has left the truck business and is now distributor for the Saxon Duplex in this territory.

Jim King, nationally known race driver, has started in business in New Orleans. He is selling high grade used cars and is located at 1431 Carondelet Street.

The Stephens Corp., Chicago, has been appointed agent for the King car in Chicago territory. This company is also distributor for Scripps-Booth.

Cleveland Tractor Co. has removed its Atlanta district office to 254 Peachtree Street, where it will have larger quarters. S. A. McGonigal will continue in charge.

P. S. Anderson, for four years manager of the Packard Motor Car Co. of Missouri, has resigned to become manager for the State of Michigan of the Lincoln Housing Trust.

Leonard Hatton has been appointed manager of the Walter M. Murphy Motors Corp., San Francisco, Lincoln distributors for California, and is reorganizing the sales force.

Wills Sainte Claire Co., Jersey City, has been organized by Myron W. Frederick, James R. McQuillan and Ralph E. Bowles to handle the Wills car in Jersey City territory.

Fuller Automobile Co. has been appointed Hupmobile distributor in Cincinnati territory. William J. Fuller is president, R. K. Le Blond vice-president and Ernest A. Roden secretary.

H. F. Steere of Tacoma, formerly sales manager of the Pacific Car Co., dealers in Hudson, Essex and Packard cars, now controls a joint interest in the firm with J. H. Davis and A. B. Cunningham.

L. H. Hagerling has been appointed Marmon dealer in Dauphin County, Pennsylvania. R. J. Church, who has been supervising Marmon sales in this territory for some, will be sales manager of the new company.

H. M. Wirth, purchasing agent of the Kelsey Wheel Co., has severed his connection with that organization and is succeeded by Arthur Conklin, who for two years was assistant to Wirth and for ten years was the company.

H. R. Stewart, formerly with the Kardell Motor Co., St. Louis, has been appointed assistant wholesale manager of the De Luxe Automobile Co., distributors of Oldsmobile cars and trucks. He will assume his new duties this week.

Walter R. Bliss, who for six years was manager of the Goodyear Boston branch and for the last four years Goodyear district

manager in New York, has returned to Boston as sales manager for the Franklin Motor Car Co., Boston.

E. P. Berrien, after nine years' absence from the Philadelphia automobile field, has returned to direct the joint distribution of Chandler and Cleveland cars in the territory as general manager of Herbert Bros. and the Cleveland-Herbert Co.

Butler Velch, Inc., San Francisco, who for several years have distributed Fageol trucks in this territory, have just taken on the Dort passenger car for distribution in northern California. This is the first passenger car this company has handled.

W. J. Drumpelmann, assistant sales manager of the Hudson and Essex for the last four years, has resigned. He was formerly in the sales department of the Chalmers Motor Co. for three years. He has not announced his future plans.

John J. Plath has been appointed director of sales of the Maxwell Motor Sales Corp., and E. W. Clark, director of sales of the Chalmers Motor Car Co. Both men have been connected with the Maxwell Motor Corp. for a number of years.

Wallace C. Capen, a pioneer in the automobile industry in St. Louis, has resigned as manager of the St. Louis branch of the White company and will be succeeded by Fred H. Squires, formerly division manager of the White company at Chicago.

Willys-Overland Pacific Co. branch in Oakland, Cal., is now in the hands of Bell & Boyd, newly formed company. The transfer was made by Frank C. Riggs, Overland western representative. The new owners, H. D. Bell and N. W. Boyd, were for years connected with the Overland company.

George R. Morris has resigned as manager of the Chevrolet New York retail store to join W. C. Sills, former sales manager of Chevrolet, in the distribution of that car in the New England district. Harry Horton, who has been manager of the Providence retail store, will succeed Morris in the New York managership.

Ian E. Maltby has joined the Milwaukee Auto Engine & Supply Co., Milwaukee, as director of sales and advertising. Maltby brings to the organization long experience in the sale of accessories and Ford supplies having been connected in recent years with the Tubular Radiator Corp. and the Bergen Mfg. Co., both of Chicago.

Anderson-Smith Motor Co. has obtained the exclusive retail selling agency for the Chevrolet in San Francisco and San Mateo counties. The factory branch at Van Ness Avenue and California Street, will be discontinued. S. M. Brown, who has been in charge of the local Chevrolet agency, will handle the firm's interests in southern California.

Harry B. Allen has recently been appointed division sales manager for the Selden Truck Corporation, Rochester, N. Y. His territory comprises Wisconsin, Minnesota and northern Michigan, with headquarters at Minneapolis. Allen's long connection with the automobile and motor truck business fits him for this position on the field forces back of the Selden truck.

J. G. Musgrove, who has been identified with the automobile business in New Orleans for a number of years, has just joined the forces of the Carter Motor Co., New Orleans, distributors for Cole and Auburn. The Car-

ter Motor **REFERENCE** **THURSDAY** of Thomas S. Turner, who conducted the Cole distributing agency for a number of years. Turner has returned to his home in Atlanta.

Charles B. Shanks, for more than six years manager of MOTOR WORLD, has become associated with the Anderson Motor Co. of Rock Hill, S. C., manufacturers of the Anderson Six. He will appear on the official roster as vice-president of the corporation, and will give principal attention to sales, advertising and service. Prior to Shanks' connection with the Class Journal Co. he was for ten years sales and advertising manager of the Winton Motor Car Co. of Cleveland.

E. A. Sattler, until recently director of sales of the Howe Rubber Corp., New Brunswick, N. J., and Theodore Weigle, formerly assistant sales manager of the same company, have taken over the sale of the entire output of the Eckrode Rubber Company, Inc., of Newark, of which Clement E. Eckrode is president. Sattler was elected vice-president of the company at a meeting of its board of directors several days ago. Sattler and Weigle are organizing for national distribution before the year's end. Operations will be conducted under the name of Eckrode Rubber Co. with offices in the Viehmann Building, New Brunswick, N. J.

MERRITT J. OSBORNE BUYS FORD AGENCY IN ST. PAUL

ST. PAUL, MINN., July 12—The Ford agency of the J. W. Hutchins Co. has been purchased outright by Merritt J. Osborne in one of the biggest deals of the year in the Northwest automotive field. The new company will be known as the M. J. Osborne Co.

Aside from the magnitude of the deal, special interest is aroused through the return of Osborne to active participation in the automobile business in this territory. He was first associated with the Schurmeier Motor Car Co. as secretary 11 years ago. Since then he has been distributor for both White trucks and Overland cars. He disposed of his interests to take the receivership of the Nilson Tractor Co. Completing this work he reembarked with Ford agencies in Hastings, Minn., and at Farmington, and is now back in St. Paul.

GORRELL NOW FAULKNER CHIEFTAIN ON COAST

SAN FRANCISCO, July 9—One of the most important announcements made in the automotive trade of northern California in June was that of an almost complete change in the personnel of the local division of Al G. Faulkner Co., Marmon distributors for California, Nevada and the Hawaiian Islands. Colonel E. S. Gorrell, formerly in charge of merchandising for Nordyke & Marmon, Indianapolis, becomes manager for the San Francisco branch, and brings with him W. E. ("Bill") Coombes as sales manager.

Coombes brings with him a number of new men into the selling ranks of the Faulkner Company, among them F. H. McManus, H. A. Rainbow, M. Roy Siglie and L. D. Whitehurst. All are well known in the high-grade automobile sales field, while Rainbow and Whitehurst have had previous connection with the Marmon selling forces.

COMING EVENTS

SHOWS

Indianapolis	Sept. 5-10	Automobile and Accessory Show in conjunction with Indiana State Fair, conducted by Indianapolis Automotive Trade Ass'n, John B. Orman, Mgr.
Cincinnati	Oct. 1-8	Fall Automobile Show, Cincinnati Automotive Dealers' Ass'n, Music Hall.
New York	Nov. 27-Dec. 3	Automobile Salon, Hotel Commodore.
Chicago	January	Automobile Salon, Drake Hotel.
New York	Jan. 7-13	National Automobile Show, under auspices of National Automobile Chamber of Commerce, Madison Square Garden.
Chicago	Jan. 28-Feb. 3	National Automobile Show, under auspices of National Automobile Chamber of Commerce, Coliseum.

RACES

Detroit	July 9-24	Michigan Plkes Association Tour, Michigan and Ontario.
Le Mans, France	July 25	Grand Prix.
Uniontown, Pa.	Labor Day	Autumn Classic.
Los Angeles	Nov. 24	Speedway Events.

CONVENTIONS

Coden, Ala.	July 25-26	Midsummer Meeting of Alabama Automobile Dealers' Ass'n.
Chicago	Oct. 12-14	National Implement & Vehicle Association Convention, Congress Hotel.
Chicago	Nov. 14-19	Annual Meeting and Business Exhibit of Automotive Equipment Association.
New York City	Nov. 22-24	Semi-Annual Convention of Factory Service Managers, N. A. C. C., H. R. Cobleigh, Secretary.

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Essex (Cabriolet)	Nov. 10, 1920-35
Fergus, 1921	Jan. 12, 1921-23
Forster	Aug. 25, 1920-33
Friend	Jan. 12, 1921-14
Globe Four	Oct. 20, 1920-32
Handley-Knight Four	Nov. 17, 1920-32
Haynes Model 50	Jan. 12, 1921-20
Jackson Four	Jan. 12, 1921-18
Kelsey	Dec. 1, 1920-31
Kenworthy 8	Jan. 12, 1921-18
Kissel Coach Sedan	Jan. 19, 1921-21
Lafayette (Coupe)	Oct. 27, 1920-40
Lexington Series T	Jan. 5, 1921-32
Liberty (Coupe)	Aug. 18, 1920-31
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National (Sextet Phaeton)	Dec. 15, 1920-36
Navarre	Jan. 12, 1921-13
Northway 6	Jan. 12, 1921-13
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Packard Single Six	Sept. 29, 1920-32
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Parenti	Jan. 12, 1921-14
Piedmont 4.30	June 29, 1921-30
Pierce-Arrow	Nov. 24, 1920-32
Premocar Special	Feb. 9, 1921-23
Rolls-Royce	Mar. 23, 1921-32
R & V Knight Four	Jan. 12, 1921-16
Sheridan Eight	Oct. 6, 1920-32
Simplicity Six	Aug. 4, 1920-40
Stanwood Six	Sept. 15, 1920-31
Sterling Knight	Feb. 2, 1921-11
Stevens-Duryea	Dec. 1, 1920-30
Wills-Sainte Claire	Mar. 16, 1921-28

Trucks

Acme (¾ ton)	April 13, 1921-33
Akron Multitruck (1 ton)	Feb. 9, 1921-32
Aries (5 ton)	Jan. 12, 1921-49
Armleder (1 ton)	Nov. 10, 1920-37
Available (1½ ton)	Aug. 4, 1920-32

MILTON'S DURANT WINS TACOMA SWEEPSTAKES

TACOMA, July 9.—Before a crowd of 30,000, Tommy Milton in a Durant Special, won the \$25,000 purse in the 250-mile event in the tenth annual racing meet here to-day. He finished the 125 laps in 2-34-15. Roscoe Sarles was second in a Duesenberg Special. The time was 2-34-52. Rene Thomas was third. His time was 2-38-47. Eddie Hearne in a Revere Special finished fourth; Tom Alley, Frontenac Special, fifth; Edward Miller, Duesenberg Special, sixth.

Eddie Pullen and Elliott, the former in a Duesenberg Special and the latter in a Leach Special, were flagged from the

course at the 100th lap. Elliott was off to a poor start. Soules led the field for the first fifty laps but was forced out in the sixty-first when he burned out pistons. Alley was forced to the pits in the fifty-eighth because of his left rear and again in the eighty-fifth.

Pullen drove a slow race because of pre-ignition troubles. Thomas changed to the rear in the eighty-fifth. Then Hearne followed suit in the eighty-eighth. Alley went to the pits again in the 98th because of his right rear.

Milton averaged better than 98 miles and broke the record of 1920, adding 500 points to his year's record. Rickenbacker refereed with Harroun driving a Marmon as pacemaker.

Avery (1 ton)	Nov. 10, 1920-36
Bessemer (4 ton)	Jan. 12, 1921-30
Bollstrom (4 ton)	Nov. 24, 1920-34
Bridgeport (1½, 2½ & 6 ton)	Jan. 12, 1921-30
Brockway (Highway Express)	Jan. 26, 1921-25
Case (2 ton)	Feb. 16, 1921-16
Clinton (1½, 2½, 3½ & 5 ton)	Jan. 12, 1921-30
Commerce (Mercantile Exp.)	Nov. 10, 1920-37
Cyclone (1½ ton)	Mar. 30, 1921-32
Duplex (2½ ton)	Aug. 18, 1920-31
Eagle (2 ton)	Aug. 11, 1920-32
Federal (5-6 ton)	May 4, 1921-32
Gramm-Bernstein (1 ton)	Nov. 10, 1920-35
Grant (1½ ton)	Aug. 11, 1920-32
G. & J. (2 & 3½ ton)	May 11, 1921-32
G. M. C. (K-15, ¾ ton; K-16, 1 ton; K-41, 3½ ton; K-101, 5 ton)	Mar. 2, 1921-28
Huffman (Models B & C 1 & 3½ tons)	June 29, 1921-30
Inter. Harvester (¾ ton)	Feb. 16, 1921-32
Kissell Speed Truck (1 ton)	Mar. 23, 1921-33
Lone Star (1½ ton)	Oct. 27, 1920-30
Lorain (2 ton)	Sept. 1, 1920-30
Mack (double red, axles)	Jan. 5, 1921-33
Moline farm truck (1½ ton)	Nov. 10, 1920-36
Pierce-Arrow (2 ton x 5, 3½ ton, W-2; 5 ton, R-10)	Sept. 8, 1920-30
Rainier (¾ & 5 ton)	Jan. 12, 1921-31
Republic Express, Model 10	Mar. 30, 1921-21
Rumely (1½ ton)	Nov. 10, 1920-36
Service Speed Wagon (1 ton)	Feb. 16, 1921-32
Standard 5-K (5 ton)	Apr. 13, 1921-33
Stoughton (1 ton)	Feb. 23, 1921-33
Stoughton (1½, 2 & 3 ton)	Aug. 25, 1920-33
Transport (¾ ton)	Nov. 3, 1920-31
Ward La France (5 ton)	Jan. 12, 1921-30
Winther	Feb. 2, 1921-11

BRAMLETTE IN LINCOLN WINS 3-DAY NEVADA RACE

RENO, NEV., July 9.—Bill Bramlette, driving a Lincoln, won the 1000-mile, three-day road race over the deserts of Nevada, which finished here July 1. Bramlette made the 1015 actual miles of the course in 29 hrs. 49 min. 49 sec., and averaged close to 35 miles an hour for the whole race.

The drivers were:

Ford—Myron Doyle and John Bart.
Hudson—E. W. Damler and Joe Grijalva.
Essex—George Harriola and B. McKelvy.
Templar—J. H. Ottens.
Buick—J. A. Nikrent and Fred A. Nikrent.
Lincoln—W. W. ("Bill") Bramlette.
Studebaker—Hart Weaver.
Hudson—Roy C. Craig and Frank Cochran.
Oldsmobile—C. W. Westwood.

Specifications of Current Passenger Car Models

NAME AND MODEL	Engine Make	Cylinders: Bore and Stroke	WB	Tires	2-Pass.	5-Pass.	7-Pass.	Coupe	Sedan	NAME AND MODEL	Engine Make	Cylinders: Bore and Stroke	WB	Tires	2-Pass.	5-Pass.	7-Pass.	Coupe	Sedan
Ace.....G	Guy	6-3 1/2 x 5	123	32x4	\$2975	\$2975	...	\$3680	\$3680	Maibohm.....B	Falls	6-3 1/2 x 4 1/2	116	32x4	11575	\$1575	11750	\$2395	\$2395
Ace.....H	H-S.	6-3 3/8 x 5	123	32x4	2975	2975	...	3680	3680	Marmon.....34	Ow.	6-3 1/2 x 5 1/2	136	32x4 1/2	4185	3985	4875	5275	
Ace.....L	H-S.	4-3 1/2 x 5	116	32x4	2260	2260	...	...	...	Maxwell.....25	Ow.	4-3 1/2 x 5 1/2	109	30x3 1/2	845	845	1445	1545
Allen.....Series 43	Ow.	6-3 1/2 x 5	110	32x4	1385	1385	...	2195	2195	McFarlan.....1921	Ow.	6-4 1/2 x 5	140	33x5	6300	6300	7500	7500	
Ambassador.....R	Cont.	6-3 1/2 x 5 1/2	136	33x5	14500	\$4500	...	6500	6500	Mercer.....Series 5	Ow.	4-3 1/2 x 5 1/2	132	32x4 1/2	4500	4500	5700	6200	
American.....C	H-S.	6-3 1/2 x 5	127	32x4	2195	2275	2350	3150	3150	Merit.....Cont.	Ow.	6-4 1/2 x 5 1/2	119	32x4	2245	2245	...	...
Anderson.....Series 40	Cont.	6-3 1/2 x 5 1/2	120	32x4	2195	1795	1845	2795	2795	Meteor.....R & RR	Dues.	4-4 1/2 x 5	129	32x4 1/2	5500	5500	...	...
Apperson.....8-21-S	Ow.	8-3 1/2 x 5	130	34x4 1/2	...	\$3500	4500	4500	4500	Metz.....M6	Rut.	6-3 1/2 x 5	120	32x4	1995	1995	2795	2895	
Apperson.....Anniversary	Ow.	8-3 1/2 x 5	130	34x4 1/2	...	4250	4250	...	...	Mitchell.....F-40	Ow.	6-3 1/2 x 5	120	33x4	1490	1490	1790	2590
Auburn.....6-39	Cont.	6-3 1/2 x 4 1/2	120	33x4	...	1695	1695	2795	2795	Mitchell.....F-42	Ow.	6-3 1/2 x 5	127	33x4	...	1995	...	...
Beggs.....20T	Cont.	6-3 1/2 x 4 1/2	120	33x4	1775	1775	...	2675	2775	Moller.....A	Ow.	4-2 1/2 x 4	100	27x3 1/2	2000	...	...	...
Bell.....4-32	H-S.	4-3 1/2 x 5	114	31x4	...	1495	...	...	...	Monroe.....S-9 & 10	Ow.	4-3 1/2 x 4 1/2	115	32x3 1/2	1295	1295	...	...
Bell.....6-50	H-S.	6-3 1/2 x 5	124	32x4	...	1695	...	...	...	Monroe.....S-11 & 12	Ow.	4-3 1/2 x 4 1/2	115	33x4	...	1985	2075	2175
Biddle.....81	Buda	4-3 1/2 x 5 1/2	121	32x4	3475	3475	...	3975	3975	Moon.....6-48	Cont.	6-3 1/2 x 4 1/2	122	32x4	2085	1985	2485	2985	
Birch Super-Four	H-S.	4-3 1/2 x 5	117	33x4	1345	1345	1395	2295	2295	Murray-Mac Six	Ow.	6-3 1/2 x 5 1/2	128	34x4 1/2	4250	4250	...	...
Birch Light Four	LeR.	4-3 1/2 x 5 1/2	108	30x3 1/2	1195	1195	...	...	...	Nash.....681-7	Ow.	6-3 1/2 x 5	121	33x4	1525	1545	1695	2395
Birch Light Six	H-S.	6-3 1/2 x 5	117	33x4	1595	1595	...	...	...	Nash.....682	Ow.	6-3 1/2 x 5	127	34x4 1/2	...	1695	...	...
Bour-Davis.....21S	Cont.	6-3 1/2 x 5 1/2	126	33x4 1/2	2385	2385	2385	...	...	Nash Four.....41-4	Ow.	4-3 1/2 x 5	112	32x3 1/2	1175	1195	1735	1935
Brewster.....91	Ow.	4-4 x 5 1/2	125	32x4 1/2	17000	7000	...	10500	10500	National Sextet	BB	Ow.	6-3 1/2 x 5 1/2	130	32x4 1/2	2990	2990	3990	3990
Briscoe.....4-34	Ow.	4-3 1/2 x 5	109	31x4	1085	1085	...	1685	1685	Nelson.....D	Ow.	4-3 1/2 x 5 1/2	104	32x4	...	1900	...	...
Brook.....S-21 A	Ow.	2-3 1/2 x 3 1/2	60	28x3	395	...	...	...	...	Noma.....IC	Cont.	6-3 1/2 x 5 1/2	123	32x4 1/2	3000	3200	4450	4450
Buick.....1922-44-S-6-7	Ow.	6-3 1/2 x 5 1/2	118	33x4 1/2	1495	1525	...	2135	2435	Northway	Ow.	6-3 1/2 x 5 1/2	128	33x5	4200	4200	6000	6400	
Buick.....1922-48-S-50	Ow.	6-3 1/2 x 5 1/2	124	34x4 1/2	...	...	1735	2525	2635	Norwalk.....430-KS	Lye.	4-3 1/2 x 5	116	32x3 1/2	...	1135	...	...
Bush.....E.C.4	Lye.	4-3 1/2 x 5	116	33x4	...	1245	...	2050	2150	Oakland.....34-C	Ow.	6-2 1/2 x 4 1/2	115	32x4	1145	1145	1815	1815	
Bush.....E.C.6	Rut.	6-3 1/2 x 5	116	33x4	1295	1575	...	...	...	Ogren.....6-60	Ow.	6-3 1/2 x 5 1/2	134	33x5	3850	3750	5000	5400
Cadillac.....59	Ow.	8-3 1/2 x 5 1/2	125	34x4 1/2	3790	3790	...	4950	5190	Oldsmobile.....43-A	Ow.	4-3 1/2 x 5 1/2	115	32x4	1325	1345	1895	2100	
Carroll.....C	Roeb.	6-3 1/2 x 5	128	...	3985	3985	...	...	...	Oldsmobile.....37A	Ow.	6-2 1/2 x 4 1/2	112	32x4	1450	1450	2145	2145
Carroll.....D	Roeb.	6-3 1/2 x 5	128	...	3185	3185	...	...	...	Oldsmobile.....46	Ow.	8-2 1/2 x 4 1/2	125	33x4 1/2	...	1825	1875	2775
Case.....V	Cont.	6-3 1/2 x 5 1/2	126	34x4 1/2	12650	2650	3400	3750	3750	Oldsmobile.....47	Ow.	8-2 1/2 x 4 1/2	115	32x4	...	1725	2225	2425	
Chalmers.....6-30	Ow.	6-3 1/2 x 5 1/2	117	32x4	1495	1545	...	2295	2445	Overland.....4	Ow.	4-3 1/2 x 5	100	30x3 1/2	695	695	1000	1275	
Chalmers.....6-30	Ow.	6-3 1/2 x 5 1/2	122	33x4 1/2	...	...	1795	...	...	Packard.....Single-Six	Ow.	6-3 1/2 x 5 1/2	116	33x4 1/2	2975	2975	3750	3975
Champion.....Tourist	Lye.	4-3 1/2 x 5	113	32x3 1/2	1095	...	...	...	...	Packard.....Twin Six	Ow.	12-8 x 5	136	35x5	4850	4850	6600	6800
Champion.....Special	H-S.	4-3 1/2 x 5	118	32x4	1395	1395	...	...	...	Paige.....6-42	Ow.	6-3 1/2 x 5	119	32x4	1635	1635	2450	2570
Chandler.....Six	Ow.	6-3 1/2 x 5	123	33x4	1785	1785	2785	2885	2885	Paige.....6-66	Cont.	6-3 1/2 x 5	131	33x4 1/2	2975	2975	3755	3880	
Chevrolet.....490	Ow.	4-3 1/2 x 4	102	30x3 1/2	635	645	1155	1195	1195	Pan.....A	Ow.	4-3 1/2 x 5	108	33x4	...	1500	...	...
Chevrolet.....FB	Ow.	4-3 1/2 x 5 1/2	110	33x4	1185	1185	1885	1885	1885	Pan American E&F-6-55	H-S.	6-3 1/2 x 5	121	33x4	2000	2000	...	...
Cleveland.....40	Ow.	6-3 x 4 1/2	112	32x4	1295	1295	2195	2295	2295	Parenti.....1921	Ow.	8-2 1/2 x 4 1/2	125	32x4	...	2000	...	...
Climber Four.....H-S	Ow.	4-3 1/2 x 5	117	32x4 1/2	1450	1385	...	...	...	Paterson.....650	Cont.	6-3 1/2 x 5 1/2	125	34x4 1/2	...	1895	1925	2895
Climber Six.....S	H-S.	6-3 1/2 x 5	125 1/2	32x4 1/2	2250	2250	...	...	...	Peelless.....56-S-7	Ow.	8-3 1/2 x 5	125	34x4 1/2	...	2990	2990	3690
Cole.....870	Nort.	8-3 1/2 x 4 1/2	127	33x5	2795	12550	2695	3995	3995	Peters.....Lye	Ow.	2-3 1/2 x 3 1/2	90	28x3	885	...	...	...
Columbia.....D-C&CS	Cont.	6-3 1/2 x 4 1/2	115	32x4	1795	1795	2495	2595	2595	Piedmont.....4-30	Lye.	4-3 1/2 x 5	116	32x3 1/2	...	1270	...	...
Comet.....C-53	Cont.	6-3 1/2 x 5 1/2	125	33x4 1/2	...	2350	2450	3650	3650	Piedmont.....6-40	Cont.	6-3 1/2 x 4 1/2	122	32x4	...	1405	...	...
Commonwealth.....44	H-S.	4-3 1/2 x 5	117	32x4	1595	...	2465	...	...	Pierce-Arrow.....6-4	Ow.	6-4 x 5 1/2	138	35x5	8000	17500	7500	8500
Crawford.....21-6-40	Cont.	6-3 1/2 x 5 1/2	122 1/2	33x4	3000	3000	...	4500	4500	Pilot.....6-45	Tector	6-3 1/2 x 5	126	32x4	1945	1895	...	...
Crow-Elkhart.....L63-65	Lye.	4-3 1/2 x 5	117	32x4 1/2	1295	1295	...	...	...	Pilot.....6-50	H-S.	4-3 1/2 x 5	126	32x4 1/2	2285	2285	3350	3400
Crow-Elkhart.....S63-65	H-S.	6-3 1/2 x 5	117	33x4	1545	1545	...	2395	...	Porter.....6-40	Ow.	4-4 1/2 x 5 1/2	126 1/2	35x5	6750	Chassis s Prior	...	...
Cunningham.....V-4	Ow.	8-3 1/2 x 5	142	35x5	...	...	...	...	...	Premier.....6-D	Ow.	6-3 1/2 x 5 1/2	126 1/2	33x5	3790	3690	3890	4690
Daniels.....D-19	Ow.	8-3 1/2 x 5 1/2	132	34x4 1/2	15350	15350	6250	6950	6950	Premecar.....6-40 A	Falls.	6-3 1/2 x 4 1/2	117	32x3 1/2	...	1295	...	...
Davis.....61-67	Ow.	6-3 1/2 x 4 1/2	120	33x4	11995	1895	2150	2795	2795	Raleigh.....A-6-60	H-S.	6-3 1/2 x 5	122	32x4 1/2	2250	2250	3100	3200	
Dispatch.....Wise	Ow.	4-3 1/2 x 5	120	34x4	1250	1350	1350	1525	1575	Ranger.....A-20	Ow.	4-3 1/2 x 5	116	32x4	...	2150	2850	2950	
Dixie Flyer.....H-S-70	H-S.	4-3 1/2 x 5	112	32x4	1445	1445	2295	2345	2345	R & V Knight.....R	Ow.	4-3 1/2 x 5	127	32x4	...	2150	2850	2950	
Dodge Brothers.....Ow.	Ow.	4-3 1/2 x 4 1/2	114	32x4 1/2	935	985	1585	1785	1785	R & V Knight.....T	Ow.	6-3 1/2 x 5 1/2	120	32x4 1/2	3350	3350	4000	4200	
Dorris.....6-80	Ow.	6-4 x 5	132	33x5	14785	4785	5800	6090	6090	Reo.....T-6	Ow.	6-3 1/2 x 5	131	32x4	1850	1850	2700	2750	
Dort.....17-12	D-Ly	4-3 1/2 x 5	108	31x4	985	985	1535	1685	1685	Roemer.....C	Dues.	4-3 1/2 x 5	131	32x4 1/2	4850	4650	14650	6500	
Dupont.....A	Ow.	4-3 1/2 x 5 1/2	124	32x4 1/2	3400	3400	...	4900	4900	Romer.....6-54-E	Cont.	6-3 1/2 x 5 1/2	120	32x4	...	...	...	...
Elcar.....K-4	Lye.	4-3 1/2 x 5	117	33x4	1300	1300	...	...	...	Rock Falls.....14000	Cont.	6-3 1/2 x 5 1/2	132	35x5	2000	2000	2100	2450
Elcar.....7-K	Cont.	6-3 1/2 x 4 1/2	117	33x4	1700	1700	2500	2600	2600	Rolls-Royce.....Ow.	Ow.	6-4 1/2 x 4 1/2	143 1/2	33x5	U. S.	Chassis s Prior	11750	...	
Elgin.....K-1	Falls	6-3 1/2 x 4 1/2	118	33x4	1595	1495	2395	2395	2395	Saxon.....125	Ow.	4-3 1/2 x 5	112	32x4	...	1495	2295	2295	
Essex.....Ow.	Ow.	4-3 1/2 x 5	108 1/2	32x4	1445	1445	...	1950	2300	Sayers Six.....DP	Cont.	6-3 1/2 x 4 1/2	113	33x4	2495	2195	...	3295	
Fergus.....S-5-21	Ow.	6-3 1/2 x 5	126	33x4 1/2	...	Chassis s Price	8500	...	...	Sayers-Booth.....B-39-42	Nort.	6-2 1/2 x 4 1/2	115	32x4	1275	1295	1950	2100
Ferris.....Cont.	Cont.	6-3 1/2 x 5 1/2	130	32x4 1/2	3350	...	\$350	4100	4100	Seneca.....L & O	Lelt.	6-3 1/2 x 5 1/2	108	30x3 1/2	1045	1045	...	...
Ford.....T	Ow.	4-3 1/2 x 4	100	30x3 1/2	**37	415	605	760	760	Severin.....L	Cont.	6-3 1/2 x 5 1/2	122	33x4	1485	1485	2100	2250	
Franklin.....9-B	Ow.	6-3 1/2 x 4	115	32x4	2550	2550	3650	3650	3650	Severin.....Six	Cont.	6-3 1/2 x 5 1/2	122	33x5	2550	2550	3200	3450	
Friend.....Four	Ow.	4-3 1/2 x 4 1/2	112	32x3 1/2	1285	1285	1985	2085	2085	Sheridan.....4	Nort.	4-3 1/2 x 5 1/2	116	33x4	1485	1485	2060	2360	
Gardner.....G	Lye.	4-3 1/2 x 5	112	32x3 1/2	1995	1995	...	2145	2145	Skelton.....8	Nort.	8-3 1/2 x 5 1/2	132	33x5	...	...	...	...
Globe.....B-10	Supr.	4-3 1/2 x 5	115	32x4	...	...	...	...	...	Southern Six.....660-2	H-S.	4-3 1/2 x 5	127	32x4 1/2	2875	2875	2995	...
Grant.....Six	Ow.	6-																	

Specifications of Current Motor Truck Models

NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive
				Front	Rear						Front	Rear						Front	Rear	
Acason	1 1/2	\$1650	3 1/2 x 5	34x5 1/2	34x5 1/2	W	Cook, 41	2	\$3000	4 x 5 1/2	36x6 1/2	38x7 1/2	I	Gary, I	1 1/2	\$2550	4 x 5 1/2	36x3 1/2	36x5	W
Acason, R	1 1/2	2280	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Corbett, E	1 1/2	2400	3 1/2 x 5	34x3 1/2	34x4	W	Gary, J	2 1/2	3150	4 1/2 x 5 1/2	36x4	36x7	W
Acason, RB	1 1/2	2485	3 1/2 x 5 1/2	36x3 1/2	36x6	W	Corbett, D	1 1/2	2800	3 1/2 x 5	36x3 1/2	36x5	W	Gary, K	3 1/2	4050	4 1/2 x 6	36x5	40x5d	W
Acason, L	2 1/2	3295	4 1/2 x 5 1/2	36x4	36x4 1/2	W	Corbett, C	2 1/2	3500	4 1/2 x 5 1/2	36x3 1/2	36x7	W	Gary, M	5	5150	5 x 6 1/2	36x6	40x6d	W
Acason, H	3 1/2	4295	4 1/2 x 5 1/2	36x5	36x5 1/2	W	Corbett, B	2 1/2	3650	4 1/2 x 5 1/2	36x4	36x7	W	Geraix M	1 1/2	3100	4 x 5 1/2	36x3 1/2	36x7	W
Acason, M	5	5250	5 x 6 1/2	36x6	40x12	W	Corbett, A	3 1/2	4500	4 1/2 x 6	36x5	36x10	W	Geraix K	2 1/2	3500	4 1/2 x 5 1/2	36x4	36x8	W
Ace, C	1 1/2	2295	3 1/2 x 5 1/2	34x3 1/2	34x5	W	Corbett, AA	5	5500	4 1/2 x 6	36x6	40x6d	W	Geraix	2 1/2	4500	4 1/2 x 6	36x5	40x12	W
Ace, A	2 1/2	2795	4 1/2 x 5 1/2	36x4	36x7	W	Cyclone	1 1/2	2800	3 1/2 x 5	34x5 1/2	36x6 1/2	I	Giant, 15-A	1 1/2	2250	3 1/2 x 5	34x3 1/2	34x5	W
Acme, G	1 1/2	2295	3 1/2 x 5 1/2	34x5 1/2	35x5 1/2	W	Dart, S	1 1/2	2295	3 1/2 x 5 1/2	34x3 1/2	34x6	W	Giant, 16	2	3150	4 1/2 x 5 1/2	36x5	36x7	W
Acme, B	1 1/2	2295	3 1/2 x 5 1/2	34x5 1/2	34x5	W	Dart, M	2 1/2	2295	4 1/2 x 5 1/2	36x4	36x7	W	Giant, 17	3 1/2	4150	4 1/2 x 5 1/2	36x5	36x5d	W
Acme, F	1 1/2	2295	3 1/2 x 5 1/2	34x5 1/2	34x5	W	Dart, W	3 1/2	2295	4 1/2 x 6	36x5	36x10	W	Globe D-20	1 1/2	1495	3 1/2 x 5	33x4 1/2	33x4 1/2	B
Acme, A	2	2295	4 1/2 x 5 1/2	36x4	36x7	W	Day-Elder, A	1	2225	3 1/2 x 5	34x3 1/2	34x4	W	Globe	1	1495	3 1/2 x 5	33x5	33x5	B
Acme, C	2	2295	4 1/2 x 5 1/2	36x5	40x10	W	Day-Elder, B	1 1/2	2425	3 1/2 x 5	34x3 1/2	34x5	W	Golden West, GH	3	5000	4 1/2 x 6	36x7	36x7	W
Acme, E	2	2295	4 1/2 x 5 1/2	36x6	40x12	W	Day-Elder, D	2 1/2	2900	4 1/2 x 5 1/2	36x4	36x7	W	Golden West, G	3 1/2	4500	4 1/2 x 6	36x6	36x6	W
Akr'n Multi-Trk 20	1	1995	4 x 5 1/2	34x5	34x5	W	Day-Elder, C	2 1/2	3125	4 1/2 x 5	36x4	36x7	W	Golden West, T	4	5500	4 1/2 x 6	36x6	36x6	W
All-Power, C	3 1/2	5800	4 1/2 x 6	36x7	36x10	W	Day-Elder, F	3 1/2	3950	4 1/2 x 5 1/2	36x5	36x5 1/2	W	Golden West, K	7	6000	5 1/2 x 6	36x6	36x6	W
All-American, B-1	1	1795	3 1/2 x 5	32x4	32x4	W	Day-Elder, E	5	4875	4 1/2 x 6	36x5	36x6d	W	Golden West, HA	7	6000	4 1/2 x 6	36x6	36x10	W
All-American, C-1	1 1/2	2195	3 1/2 x 5	34x4	34x5	I	Dearborn, F	1 1/2	2180	3 1/2 x 5 1/2	34x4	34x5	W	Gove, A-1	2 1/2	2495	4 1/2 x 5 1/2	36x4	36x7	I
American, 25	2 1/2	3350	4 x 6	36x4	36x4d	W	Dearborn, 48	2	2590	3 1/2 x 5 1/2	35x5 1/2	34x7 1/2	W	Graham Bros. A	1 1/2	1495	3 1/2 x 5	35x5 1/2	35x5 1/2	I
American, 40	4	4275	4 1/2 x 6	36x5	36x5d	W	Defiance, G	1	1975	3 1/2 x 5	35x5 1/2	35x5 1/2	I	Gramm-Born, 10	1	2050	3 1/2 x 5	36x3 1/2	36x5	I
Apex, G	1	1675	3 1/2 x 5	33x5 1/2	33x5 1/2	W	Defiance, D	1 1/2	2550	3 1/2 x 5	35x5 1/2	36x6 1/2	I	Gramm-Born, 15	1 1/2	2725	3 1/2 x 5	36x3 1/2	36x5	W
Apex, D	1 1/2	1915	3 1/2 x 5 1/2	34x3 1/2	34x4	I	Defiance, E	2	2750	3 1/2 x 5	35x5 1/2	38x7 1/2	I	Gramm-Born, 20	2	3175	4 1/2 x 5 1/2	36x4	36x7	W
Apex, E	2 1/2	2695	4 1/2 x 5 1/2	36x4	36x7	I	DeKalb, E2 1/2	2	2600	4 1/2 x 5 1/2	36x4	36x6	W	Gramm-Born, 25	2 1/2	3575	4 1/2 x 5 1/2	36x4	36x7	W
Apex, F	3 1/2	3975	4 1/2 x 6	36x5	36x10	I	DeKalb, E2	2 1/2	2250	4 1/2 x 5 1/2	34x3 1/2	36x5	W	Gramm-Born, 30	3 1/2	4375	4 1/2 x 5 1/2	36x5	40x5d	W
Armleder, 20	1	1995	3 1/2 x 5 1/2	34x3 1/2	34x5	W	DeMartini 1 1/2	1 1/2	2600	3 1/2 x 5	34x3 1/2	34x6	W	Gramm-Born, 35	5	5275	4 1/2 x 6	36x6	40x6d	W
Armleder, HW	2 1/2	2295	4 1/2 x 5 1/2	36x4	36x7	W	DeMartini 2	2	3300	4 x 5 1/2	36x3 1/2	36x7	W	Hahn, J	1	1495	3 1/2 x 5	34x5	34x5	W
Armleder, KW	3 1/2	2295	4 1/2 x 5 1/2	36x5	36x5d	W	DeMartini 3	3	4250	4 1/2 x 5 1/2	36x4	36x10	W	Hahn, CD	1 1/2	2250	4 1/2 x 5 1/2	36x4	36x6	W
Atco, B	1 1/2	2295	3 1/2 x 5 1/2	34x5 1/2	36x6	I	DeMartini 4	4	4800	4 1/2 x 6	36x5	36x12	W	Hahn, EE	2 1/2	2250	4 1/2 x 5 1/2	36x4	36x6	W
Atco, B1	1 1/2	2295	3 1/2 x 5 1/2	34x5 1/2	36x6	I	Denby, 12	1	2200	3 1/2 x 5	35x5 1/2	36x6	I	Hahn, F	3 1/2	2250	4 1/2 x 5 1/2	36x5	36x10	W
Atco, A	2 1/2	2295	4 1/2 x 5 1/2	36x4	36x8	W	Denby, 33	1 1/2	2300	3 1/2 x 5	35x5 1/2	38x7 1/2	I	Hahn, EF	5	4150	4 1/2 x 6	36x6	40x12	W
Atlas, M.D	1 1/2	2295	3 1/2 x 5 1/2	34x5 1/2	34x5 1/2	W	Denby, 134	2	2800	3 1/2 x 5	36x3 1/2	36x6	I	Hal Fur, E	1	2350	4 x 5	35x5 1/2	35x5 1/2	W
Attorney, 20R	1 1/2	2775	3 1/2 x 5	34x3 1/2	34x5	W	Denby, 25	3	3600	4 1/2 x 5 1/2	36x4	36x7	I	Hal Fur, F	2 1/2	3250	4 1/2 x 5 1/2	36x5	38x7	W
Attorney, 7CX	2 1/2	3375	4 1/2 x 5 1/2	36x4	36x4d	W	Denby, 27	4	4600	4 1/2 x 5 1/2	36x5	36x5d	I	Hal Fur, G	3 1/2	4250	4 1/2 x 5 1/2	36x6	40x10	W
Attorney, 7D	3 1/2	4175	4 1/2 x 5 1/2	36x5	40x5d	W	Denby, 210	5	5350	4 1/2 x 5 1/2	36x6	40x6d	I	Harvey, WEA	1 1/2	2550	4 1/2 x 5 1/2	34x3 1/2	34x5	W
Attorney, 8E	5	5575	4 1/2 x 6	36x5	40x6d	W	Dependable, A	3 1/2	1650	3 1/2 x 5	34x5	36x6	W	Harvey, WFA	3 1/2	3300	4 1/2 x 5 1/2	36x4	36x7	W
Autocar, 21UF	1 1/2	2300	4 1/2 x 5 1/2	34x4	34x5	D	Dependable, C	1 1/2	2350	3 1/2 x 5	34x3 1/2	34x5	W	Harvey, WHA	3 1/2	4300	4 1/2 x 6	36x6	36x5d	W
Autocar, 21UG	1 1/2	2400	4 1/2 x 5 1/2	34x4	34x5	D	Dependable, D	2	2650	4 x 5 1/2	34x5	36x6	W	Harvey, WKA	5	5200	4 1/2 x 6	36x6	40x6d	W
Autocar, 26	2 1/2	4350	4 1/2 x 5 1/2	34x5	36x10	D	Dependable, E	2 1/2	2950	4 1/2 x 5 1/2	36x4	36x7	W	Hawkeye, K	1 1/2	2385	3 1/2 x 5	34x3 1/2	34x5	I
Autocar, 26-B	2 1/2	4500	4 1/2 x 5 1/2	34x5	36x10	D	Dependable, G	3	3550	4 1/2 x 6	36x6	36x7	W	Hawkeye, M	3	2915	4 1/2 x 5 1/2	36x4	36x6	I
Available, H1 1/2	1 1/2	2750	4 x 5 1/2	36x2 1/2	36x5	W	Diamond-T, O	1	2500	3 1/2 x 5 1/2	34x5 1/2	36x6 1/2	W	Hawkeye, N	3 1/2	4345	4 1/2 x 6	36x5	36x10	I
Available, H2 1/2	2 1/2	3475	4 x 5 1/2	36x2 1/2	36x5	W	Diamond-T, FS	1 1/2	2960	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Hendrickson, N	2 1/2	3150	4 1/2 x 5 1/2	36x4	36x7	W
Available, H3 1/2	3 1/2	4475	4 1/2 x 5 1/2	36x5	40x5d	W	Diamond-T, T	1 1/2	2650	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Hendrickson, M	3 1/2	3975	4 1/2 x 5 1/2	36x5	36x5d	W
Available, H5	5	5375	4 1/2 x 6	36x6	40x12	W	Diamond-T, U	2	3285	4 x 5 1/2	36x4	36x7	W	Highway, Knight B	5	1850	4 x 6	36x5	40x6d	W
Available, H7	7	6000	5 x 6	36x6	40x14	W	Diamond-T, K	3 1/2	4675	4 1/2 x 5 1/2	36x5	36x5d	W	Highway, Knight B	5	1850	4 x 6	36x5	40x6d	W
Avery	1	1800	3 x 4	34x5 1/2	34x5 1/2	I	Diamond-T, EL	5	5400	4 1/2 x 5 1/2	36x6	40x6d	W	Higraide, A17	1 1/2	2100	3 1/2 x 5	35x5 1/2	35x5 1/2	W
Beck, A. Jr.	1	2550	3 1/2 x 5	34x3 1/2	34x4	I	Diamond-T, S	5	5650	4 1/2 x 6	36x6	40x6d	W	Higraide, A18	1 1/2	1995	3 1/2 x 5	34x3 1/2	34x6	I
Beck, C	1 1/2	2250	3 1/2 x 5 1/2	34x3 1/2	34x5 1/2	I	Diehl, A	1	1350											

Specifications of Current Motor Truck Models—Continued

NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive
				Front	Rear						Front	Rear						Front	Rear	
Kelly-S, K-45	4	\$4550	4 1/2 x 8 1/2	36x5	40x6d	C	Ogden, A1	1 1/2	\$2550	3 1/2 x 5	36x3 1/2	36x5	W	Service, 71	3 1/2	\$4285	4 1/2 x 5 1/2	36x5	36x5d	W
Kelly-S, K-50	4	4900	4 1/2 x 8 1/2	36x6	40x6d	C	Ogden, E	2 1/2	3250	4 1/2 x 5 1/2	36x4	36x7	W	Service, 76	3 1/2	4485	4 1/2 x 6	36x5	36x5d	W
Kelly-S, K-50	6	5100	4 1/2 x 8 1/2	36x6	40x7d	C	Old Hickory, W	1 1/2	2175	3 1/2 x 5	36x3 1/2	36x4	W	Service, 101	5	5275	4 1/2 x 6	36x6	40x6d	W
Keystone, 40	2	2450	3 1/2 x 5 1/2	34x5 1/2	38x7 1/2	I	Old Reliable, A	1 1/2	2350	4 x 5	34x4	36x6	W	Signal, NF	1	2475	4 1/2 x 5	34x5 1/2	36x6 1/2	W
Kimball, AB	2	3675	4 x 6	36x4	36x7	W	Old Reliable, B	2 1/2	3500	4 1/2 x 6	34x4	36x4d	W	Signal, H	1 1/2	2925	4 1/2 x 5 1/2	34x4	36x6	W
Kimball, AK	3	3975	4 1/2 x 6	36x4	36x8	W	Old Reliable, C	3 1/2	4250	4 1/2 x 6	36x5	36x5d	W	Signal, J	3 1/2	3275	4 1/2 x 5 1/2	34x4	36x8	W
Kimball, AE	4	4500	4 1/2 x 6	36x4	36x10	W	Old Reliable, D	5	5250	4 1/2 x 6	36x6	40x6d	W	Signal, M	5	4275	4 1/2 x 5 1/2	36x5	40x5d	W
Kimball, AF	3	5000	4 1/2 x 6	36x5	40x12	W	Old Reliable, KLM	7	6000	4 1/2 x 6	36x6	40x7d	C	Signal, R	5	5300	4 1/2 x 6	36x6	40x6d	W
Kimball, AG	5	5975	5 x 8	36x6	40x7d	W	Oldsmobile Econ.	1	1500	3 1/2 x 5 1/2	35x5 1/2	35x5 1/2	I	Southern, 10	1	2090	3 1/2 x 5	34x3 1/2	34x4	W
Kissel, Express	1	1985 1/2	3 1/2 x 5 1/2	34x5 1/2	34x5 1/2	W	Olympic, A	2 1/2	3500	4 1/2 x 5 1/2	36x4	36x7	W	Southern, 15	1 1/2	2590	3 1/2 x 5 1/2	36x6 1/2	34x4	W
Kissel, Utility	1 1/2	2775	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Oneida, A-9	1 1/2	2350	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Southern, 20	2	2990	4 1/2 x 5 1/2	36x6 1/2	40x8	W
Kissel, Freight	2 1/2	3475	4 1/2 x 5 1/2	36x4	36x7	W	Oneida, B-9	1 1/2	2915	4 x 5 1/2	36x4	36x7	W	Standard, 1-K	1-1 1/2	1950	3 1/2 x 5	34x3 1/2	34x5	W
Kissel, H. D.	4	4475	4 1/2 x 5 1/2	36x5	36x5d	W	Oneida, C-9	2 1/2	3390	4 x 5 1/2	36x4	36x7	W	Standard, 76	2 1/2-3	3100	4 1/2 x 5 1/2	36x4	36x7	W
Kloiber, AA	1	2600	4 1/2 x 5 1/2	34x3 1/2	34x5	W	Oneida, D-9	3 1/2	4345	4 1/2 x 5 1/2	36x5	36x10	W	Standard, 66	3 1/2-4	4000	4 1/2 x 5 1/2	36x5	36x10	W
Kloiber, AB	1 1/2	3100	4 1/2 x 5 1/2	36x3 1/2	36x6	W	Oneida, E-9	5	5460	4 1/2 x 5 1/2	36x6	40x12	W	Standard, 5-K	5-6	5250	4 1/2 x 6	36x6	40x12	W
Kloiber, BB	2	3600	4 1/2 x 5 1/2	36x4	36x7	W	Orleans, A	1 1/2	2750	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Sterling, 1 1/2	1 1/2	3200	4 x 5 1/2	36x3 1/2	36x5	W
Kloiber, B	2 1/2	4200	4 1/2 x 5 1/2	36x5	36x8	W	Orleans, B	2 1/2	3250	4 1/2 x 5 1/2	36x4	36x7	W	Sterling, 2 1/2	2	3500	4 x 5 1/2	36x4	36x6	W
Kloiber, C	3 1/2	4900	4 1/2 x 5 1/2	36x5	36x5d	W	Orleans, C	3 1/2	3750	4 1/2 x 5 1/2	36x4 1/2	36x8	W	Sterling, 3 1/2	2 1/2	3650	4 1/2 x 5 1/2	36x5	36x4d	W
Kloiber, D	5	5600	5 x 8 1/2	36x6	40x12	W	Orleans, D	5	4250	4 1/2 x 5 1/2	36x6	40x8	W	Sterling, 5	5	4650	4 1/2 x 5 1/2	36x5	40x5d	W
Koehler, D	1 1/2	....	3 1/2 x 5	34x3 1/2	34x5	W	Oshkosh, A	2	3750	3 1/2 x 5	36x6 1/2	36x8	W	Sterling, 5-W	5	5500	5 x 6 1/2	36x6	40x6d	W
Koehler, M	2 1/2	....	4 x 5 1/2	36x4	36x7	W	Oshkosh, AA	2 1/2	3850	3 1/2 x 5	36x6 1/2	36x8	W	Sterling, 5-C	5	6000	5 x 6 1/2	36x6	40x6d	C
Koehler, MCS	2 1/2	....	4 x 5 1/2	36x4	36x7	W	Oshkosh, B	2 1/2	4150	4 x 5 1/2	36x7 1/2	36x7 1/2	W	Sterling, 7 1/2	7 1/2	6500	5 x 6 1/2	36x6	40x7d	W
Koehler, F	3 1/2	....	4 1/2 x 5 1/2	36x5	36x10	W	Oshkosh, BB	2 1/2	4300	4 x 5 1/2	36x7 1/2	36x7 1/2	W	Stewart, 11	1 1/2	1350	3 1/2 x 5 1/2	32x4 1/2	32x4 1/2	I
Koehler, MT, Trac	5	....	4 x 5 1/2	36x4	36x7	W	Packard, EC	....	3500	4 1/2 x 5 1/2	36x4	36x7	W	Stewart, 15	1	1875	3 1/2 x 5	35x5 1/2	35x5 1/2	I
L.M.C., 2-20	2 1/2	2540	4 1/2 x 5 1/2	36x4	36x4d	I	Packard, ED	....	4100	4 1/2 x 5 1/2	36x5	36x5d	W	Stewart, 9	1 1/2	2200	3 1/2 x 5	34x3 1/2	34x5	I
Lange, B	2 1/2	3350	4 1/2 x 5 1/2	36x4	36x6	C	Packard, EF	....	4580	5 x 5 1/2	36x6 1/2	40x6 1/2	W	Stewart, 7	2	2800	4 1/2 x 5 1/2	34x4	34x7	I
Larrabee, U	1 1/2	2400	3 1/2 x 5	34x3 1/2	34x5	W	Packard, EX	....	4000	4 1/2 x 5 1/2	36x6 1/2	40x8	W	Stewart, 7-X	2 1/2	2950	4 1/2 x 5 1/2	34x4	34x7	I
Larrabee, K	2 1/2	3400	4 1/2 x 5 1/2	36x4	36x7	W	Paige, 52-19	1 1/2	2880	4 x 5 1/2	34x3 1/2	34x6	W	Stewart, 10	3 1/2	3850	4 1/2 x 5 1/2	36x5	36x5d	W
Larrabee, L	3 1/2	4200	4 1/2 x 5 1/2	36x5	36x5d	W	Paige, 54-20	2 1/2	3400	4 1/2 x 5 1/2	34x4	34x4d	W	Stewart, 10-X	3 1/2	3850	4 1/2 x 6	36x5	36x5d	W
Larrabee, W	5	5100	4 1/2 x 6	36x6	40x6d	W	Paige, 51-18	3 1/2	4235	4 1/2 x 5 1/2	36x5	36x5d	W	Stoughton, A	1	1995	3 1/2 x 5 1/2	34x4 1/2	35x5 1/2	W
Lion, L	1	2350	3 1/2 x 5 1/2	36x5 1/2	36x7	W	Parker, F20	2	3500	4 x 6	34x4	36x4d	W	Stoughton, B	1 1/2	2350	3 1/2 x 5 1/2	36x5	36x5	W
Loedingham, C	1 1/2	2100	3 1/2 x 5 1/2	36x5 1/2	36x7	W	Parker, J20	3 1/2	4400	4 1/2 x 6	36x5	40x5d	W	Stoughton, D	2	2800	4 x 5 1/2	36x4	36x7	W
Loedingham, W	2 1/2	2700	3 1/2 x 5 1/2	36x5 1/2	36x7	W	Parker, M20	5	5500	4 1/2 x 6	36x6	40x6d	W	Stoughton, F	3	3800	4 1/2 x 5 1/2	36x5d	36x5d	W
Loedingham, W	2 1/2	3150	4 1/2 x 5 1/2	36x4	36x7	W	Patriot, Reverse	3 1/2	1785	3 1/2 x 5	35x5 1/2	35x5 1/2	W	Sullivan, E	2	3350	4 1/2 x 5 1/2	36x4	36x7	W
Maccar, L	1 1/2	2925	4 1/2 x 5 1/2	36x4	36x6	W	Patriot, Lincoln	1 1/2	2450	4 x 5 1/2	34x3 1/2	34x5	W	Sullivan, H	3 1/2	4650	4 1/2 x 6	36x5	36x5d	W
Maccar, H-2	2 1/2	3750	4 1/2 x 5 1/2	36x4	36x4d	W	Patriot, Washg'tn	1 1/2	3450	4 1/2 x 5 1/2	36x4	36x7	W	Superior, D	1	1650	3 1/2 x 5	34x4 1/2	34x4	I
Maccar, M-2	3 1/2	4500	4 1/2 x 6	36x5	36x5d	W	Piedmont, 4-30	1 1/2	1685	3 1/2 x 5	34x4 1/2	34x4 1/2	W	Superior, E	2	2600	4 1/2 x 5 1/2	36x4	36x6	W
Maccar, G	5	5500	4 1/2 x 6	36x5	40x6d	W	Pierce-Arrow	2	3750	4 x 5 1/2	36x4	36x4d	W	Super Truck, 50	2 1/2	3300	4 x 6	36x4	36x8	W
MacDonald, A	7 1/2	5750	4 1/2 x 6	40x7	40x14	I	Pierce-Arrow	3 1/2	4950	4 1/2 x 6	36x5	36x5d	W	Super Truck, 70	3 1/2	4300	4 1/2 x 6	36x5	40x5d	W
Mack, AB D.R.	1 1/2	3450	4 x 5	36x4	36x3 1/2d	C	Pierce-Arrow	5	5700	4 1/2 x 6	36x5	40x6d	W	Super Truck, 100	5	5300	4 1/2 x 6	36x5	40x12	W
Mick, AB	2 1/2	3400	4 x 5	36x4	36x4d	C	Pioneer, 50	1	1550	3 1/2 x 4 1/2	32x4 1/2	32x4 1/2	W	Super Truck, 150	7 1/2	6300	5 x 6	36x6	40x7d	W
Mack, AB Chain	1 1/2	3000	4 x 5	36x4	36x3 1/2d	C	Pittsburgh, B 21	2 1/2-3	3800	4 1/2 x 5 1/2	36x4 1/2	36x7	W	Texas, A35	1 1/2	1095	3 1/2 x 5	33x4	33x4	I
Mack, AB Chain	2	3300	4 x 5	36x4	36x4d	C	Pony	1 1/2	400	2 1/2 x 4	28x3 1/2	28x3 1/2	C	Texas, TK30	1 1/2	1550	3 1/2 x 5	36x6	38x7	W
Mack, AB D.R.	3 1/2	3750	4 x 5	36x4	36x4d	C	Power, F	1 1/2	....	3 1/2 x 5 1/2	36x6	36x6	W	Tiffin, GW	1 1/2	2095	4 1/2 x 5 1/2	36x4 1/2	36x5	W
Mack, AC Chain	3 1/2	4950	5 x 6	36x5	40x5d	C	Power, C	1 1/2	....	4 1/2 x 5 1/2	36x5	40x10	W	Tiffin, MW	2 1/2	3580	4 1/2 x 5 1/2	36x4	36x3 1/2d	W
Mack, AC Chain	5	5500	5 x 6	36x6	40x6d	C	Promecar, B-143	3 1/2	2475	3 1/2 x 5	36x6 1/2	36x6 1/2	W	Tiffin, PW	3 1/2	4780	4 1/2 x 5 1/2	36x5	40x5d	W
Mack, AC Chain	6 1/2	6750	5 x 6	36x6	40x12	C	Rainier, R-11	3 1/2	2150	3 1/2 x 5	36x5 1/2	36x5 1/2								

Specifications of Current Motor Truck Models—Continued

NAME AND MODEL	Tons Capacity	Chassis Price	Base and Stroke	TIRES	Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Base and Stroke	TIRES	Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Base and Stroke	TIRES	Final Drive
				Front Rear						Front Rear						Front Rear	
Ward-Laf., 5A	5	\$5590	5 x 6 1/2	36x8 36x8 1/2	W	Wichita, O	3 1/2	\$4000	4 1/2 x 6	36x5 36x5 1/2	W	Winther, 438	1 1/2	\$2350	3 1/2 x 5	32x4 32x4 1/2	I
Watson, E	1	1895	3 1/2 x 5 1/2	34x4 1/2 31x4 1/2	W	Wichita, S	5	5000	4 1/2 x 6	36x6 40x6d	W	Winther, 39	1 1/2	2450	3 1/2 x 5	34x3 1/2 34x5	I
Watson, N	3 1/2	4250	4 1/2 x 5 1/2	36x5 36x10	W	Wilcox, AA	1	2100	3 1/2 x 5 1/2	36x4 36x4 1/2	W	Winther, 49	2	3250	4 x 5	34x4 34x4d	I
Western, W1 1/2	1 1/2	2550	4 1/2 x 5 1/2	36x2 1/2 36x5	W	Wilcox, B	1 1/2	2775	4 1/2 x 5	36x4 36x5	W	Winther, 70	3 1/2	4200	4 x 6	36x5 36x5d	I
Western, L1 1/2	1 1/2	2550	3 1/2 x 5	36x3 1/2 36x5	W	Wilcox, D	2 1/2	3300	4 1/2 x 5	36x4 36x3 1/2	W	Winther, 450	4	3690	4 x 5	34x5 36x6	I
Western, W2 1/2	2 1/2	3250	4 1/2 x 5 1/2	36x4 36x7	W	Wilcox, E	3 1/2	4250	4 1/2 x 5	36x5 36x5d	W	Winther, 100	5	5250	4 1/2 x 6	36x6 40x5d	I
Western, L2 1/2	2 1/2	3250	4 1/2 x 6	36x4 36x7	W	Wilcox, F	5	5200	4 1/2 x 6 1/2	36x5 40x6d	W	Winther, 140	7	5900	5 x 6	36x6 40x7d	I
Western, W3 1/2	3 1/2	4250	4 1/2 x 6	36x5 40x5d	W	Wilcox, G	1 1/2	2270	3 1/2 x 5	36x3 1/2 36x5	W	Wisconsin B	1	1950	4 x 5 1/2	34x3 1/2 34x5 1/2	W
White, 15	2	2400	3 1/2 x 5 1/2	34x5 1/2 34x5 1/2	D	Wilcox, EA	2 1/2	2825	4 1/2 x 5 1/2	36x4 36x7	W	Wisconsin C	1 1/2	2250	4 1/2 x 5 1/2	34x5 1/2 36x6 1/2	W
White, 20	2	3250	3 1/2 x 5 1/2	36x4 36x7	B	Wilcox, G	3 1/2	3685	4 1/2 x 5 1/2	36x5 36x5d	W	Wisconsin D	2 1/2	3500	4 1/2 x 6 1/2	36x6 36x10	W
White, 40	3 1/2	4200	3 1/2 x 5 1/2	36x5 40x5d	D	Winthor, H	5	4520	4 1/2 x 6	36x6 40x6d	W	Wisconsin E	3 1/2	4000	5 x 6 1/2	36x6 36x12 1/2	W
White, 45	5	4500	4 1/2 x 5 1/2	36x6 40x6d	D	Winthor, 751	5 1/2	1795	3 1/2 x 5	34x4 1/2 35x5 1/2	I	Witt-Witt, N	1 1/2	2750	4 1/2 x 5 1/2	36x3 1/2 36x5 1/2	W
White Hick., E	1	2450	3 1/2 x 5	34x5 1/2 34x5 1/2	W	*2-cyl. 18-cyl. 18-cyl. All others, not marked. are 4-cyl. Tractor. Tractor. **Canadian made. Final Drive: W—Worm, I—Internal Gear. C—Chains, D—Double Reduction, B—Bevel, 4— Four-Wheel, E—External Gear. *Tires—optional. †Pneumatic Tires. All others solid. ††—Price includes body. ‡—Price includes several items of equipment.											
White Hick., H	1 1/2	2750	3 1/2 x 5	36x3 1/2 36x5	W							Wolverine, J	1	2125	3 1/2 x 5	34x3 1/2 34x5	I
White Hick., K	2 1/2	3350	4 1/2 x 5 1/2	36x4 36x5	W							Wolverine, J	1 1/2	2375	3 1/2 x 5	34x3 1/2 34x5	I
Wichita, K	1	2300	3 1/2 x 5	36x3 1/2 36x4 1/2	W							Wolverine, J	2	2640	3 1/2 x 5	34x4 34x5	I
Wichita, L	1 1/2	2600	3 1/2 x 5 1/2	36x3 1/2 36x5	W							Wolverine, J	2 1/2	3425	4 x 5 1/2	36x5 36x10	I
Wichita, M	2	2800	3 1/2 x 5 1/2	36x3 1/2 36x6	W							Wolverine, L	3 1/2	4100	4 1/2 x 5 1/2	36x5 36x10	I
Wichita, R	2 1/2	3000	3 1/2 x 5	36x4 36x7	W							Yellow Cab M21	1 1/2	2050	3 1/2 x 5	32x4 32x4	B
Wichita, RX	2 1/2	3600	4 1/2 x 6	36x4 36x8	W							Yellow Cab M41	1 1/2	2350	3 1/2 x 5	34x4 1/2 34x4 1/2	W

Farm Tractor Specifications and Prices

TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Base, Stroke	Fuel	Pump Capacity	TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Base, Stroke	Fuel	Pump Capacity	TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Base, Stroke	Fuel	Pump Capacity
All-In One	16-30	\$1975	3	Clim.	4-5 x 6 1/2	GDK	3-4	Gray... 1920	18-36	\$2000	3	Wauk	4-4 1/2 x 6 1/2	Gas.	4	Post... D	12-20	\$1800	4	Wauk	4-4 1/2 x 6 1/2	Gas.	2
Alia-Chalm. B	6-12	925	2	LeR.	4-3 1/2 x 4 1/2	Gas.	1-2	Ground Hog	19-31	2000	4	Erd.	4-4 x 6	GorK	3	Prairie Dog... L	9-18	650	3	Wauk	4-3 1/2 x 6 1/2	Gas.	2
Alia-Chalm. G.P.	6-12	850	2	LeR.	4-3 1/2 x 4 1/2	Gas.	1-2	Gr. Western St.	20-30	1950	4	Beav.	4-4 1/2 x 6	GorK	3	Prairie Dog... D	15-30	1250	4	Wauk	4-4 1/2 x 6 1/2	Gas.	3
Alia-Chalm. L	12-20	1495	2	Mid. W	4-4 1/2 x 5 1/2	Gas.	2-3	Hart-Parr... 20	20	905	4	Own	2-5 1/2 x 6 1/2	K.D	3	Ranger Cut	8-16		4	LeR.	4-3 1/2 x 4 1/2	Gas.	1
Alia-Chalm. M	18-20	2150	4	Own	4-4 1/2 x 6 1/2	GorK	3-4	Hart-Parr... 30	30	1595	4	Own	2-6 1/2 x 7	K.D	3	Reed... T-20	15-30	2250	4	Dom	4-4 1/2 x 6	K.	3-4
Alia-Chalm. N	10-18	875	4	Own	4-4 1/2 x 6 1/2	G.K	4	Heider... D	9-18	1170	4	Wauk	4-4 1/2 x 5 1/2	G.K	3	Reed... A-1	18-36	2400	4	Dom	4-5 x 6	Gas.	4
Allwork... 2-G	14-28		4	Own	4-4 1/2 x 6 1/2	GorK	3	Heider... C	12-20	1395	4	Wauk	4-4 1/2 x 6 1/2	G.K	3	Reliable...	10-20	985	4	Own	2-6 x 7	Ker.	2
Andrews... Kin.D	18-36	2500	4	Clim.	4-5 x 6 1/2	GorK	3	Heider... Cult	6-10	1050	4	LeR.	4-3 1/2 x 4 1/2	Gas.	1	Rel.	12-25	1600	4	Wauk	4-4 1/2 x 5 1/2	GorK	3
Appleton...	12-20	1500	4	Buda	4-4 1/2 x 5 1/2	G.K	2-3	Hicks...	20-30		4	Wauk	4-4 1/2 x 6	GorK	3	Russell...	12-24	1500	4	Own	4-4 1/2 x 5 1/2	GorK	2-3
Are... 1921	3-5	550	4	Own	1-4 1/2 x 5	Gas.	1	Huber Light 4	12-25	1185	4	Wauk	4-4 1/2 x 5 1/2	GorK	3	Russell...	15-30	2200	4	Own	4-5 x 6 1/2	GorK	3-4
Aultman-T...	15-30	2200	4	Clim.	4-5 x 6 1/2	G.K	4	Huber Super 4	16-30	1885	4	Midw.	4-4 1/2 x 6	Gas.	3	Russell...	20-35	3000	4	Own	4-5 1/2 x 7	GorK	4-5
Aultman-T...	22-45	3850	4	Own	4-5 1/2 x 8	G.K	6									Russell...	30-60	5000	4	Own	4-8 x 10	GorK	8-10
Aultman-T...	30-60	5000	4	Own	4-7 x 9	G.K.D	8	Illinois Super...	18-36	2500	4	Clim.	4-5 x 6 1/2	G.K	4	Samsen... M		995	4	Nov.	4-4 x 5 1/2	G.K	2
Automot. B-3	12-24	1785	4	Herc.	4-4 x 5 1/2	Gas.	2-3	Imperial... C	40-70	5000	4	Own	4-7 1/2 x 9	G.K.D	10	Sandusky... J	10-20	1250	4	Own	4-4 1/2 x 5 1/2	G.K.D	2
Avery SR, Cal	5-10		4	Own	4-3 x 4	G.K	1	Indiana... F	5-10		2	LeR.	4-3 1/2 x 4 1/2	Gas.	1-2	Sandusky... E	15-35	1750	4	Own	4-5 x 6 1/2	G.K.D	4
Avery Cult-C	5-10		3	Own	4-3 x 4	G.K	2	International...	8-16	1000	4	Own	4-4 1/2 x 5	G.K.D	2	Shawnee Com.	6-12		2	LeR.	4-3 1/2 x 4 1/2	Gas.	10
Avery... B	5-10		4	Own	4-3 x 4	G.K	2	International...	15-30	1950	4	Own	4-4 1/2 x 6	G.K.D	4	Shawnee Com.	9-18		2	Gray	4-3 1/2 x 5	Gas.	10
Avery... C	8-16		4	Own	2-5 1/2 x 6	G.K.D	2-3	J-T... N	20-40	3485	2	Chief	4-4 1/2 x 6	G.K.D	3-4	Shelby... C	15-30		4	Beav.	4-4 1/2 x 6	G.K	3
Avery...	12-20		4	Own	4-4 1/2 x 6	G.K.D	2-3	Klamb... F	16-32	1650	4	Clim.	4-5 x 6 1/2			Shelby... C	10-20		4	Erd.	4-4 x 6	GorK	2-3
Avery...	12-25		4	Own	2-6 1/2 x 7	G.K.D	3-4	LaCrosse... M	6-12	980	4	Own	2-4 x 6	G.K	1	Short Turn...	20-40	1500	3	Beav.	4-4 1/2 x 6	G.K	3
Avery...	14-28		4	Own	4-4 1/2 x 7	G.K.D	3-4	LaCrosse... G	12-24	1250	4	Own	2-6 x 7	GorK	3	Square T... A	18-35	2075	3	Clim.	4-5 x 6 1/2	G.K	3
Avery...	18-36		4	Own	4-5 1/2 x 6	G.K.D	4-5	Lancaster... 12-25	1495	4	Midw.	4-4 1/2 x 5 1/2	Gas.	3	Steady Pull...	12-24	1485	4	Own	4-4 x 6	Gas.	3	
Avery...	25-50		4	Own	4-6 1/2 x 7	G.H.D	6-6	Lancaster... 15-25	1685	4	Beav.	4-4 1/2 x 6	GorK	3-4	Stinson... 4E	18-36	1835	4	Beav.	4-4 1/2 x 6	G.K	4	
Avery...	45-65		4	Own	4-7 1/2 x 8	G.K.D	8-10	Lancaster... 21	15-30	1985	4	Beav.	4-4 1/2 x 6	GorK	3-4	Stone...	20-40		4	Beav.	4-4 1/2 x 6	G.K	4
Bates...	15-25		4	Own	4-4 1/2 x 6	Ker.	3	Leader... B	12-18	1095	4	Own	2-6 x 6 1/2	G.K.D	3-4	Tiga... 3	15-27	2625	4	Wisc.	4-4 1/2 x 6	Gas.	3-4
Bates Mule H	18-25		4	Midw	4-4 1/2 x 6 1/2	Gas.	3	Leader... N	16-32	1985	4	Clim.	4-5 x 6 1/2	G.K	3-4	Titan...	10-20	1000	4	Own	2-6 1/2 x 6	G.K.D	3
Bates Mule F	18-25		4	Midw	4-4 1/2 x 6 1/2	Gas.	3	Leader... 18	16-32	1985	4	Clim.	4-5 x 6 1/2	G.K	3-4	Top...	30-45	3500	4	Wauk	4-4 1/2 x 6 1/2	Gas.	3-4
Bates Mule G	25-35		4	Midw	4-4 1/2 x 6 1/2	Gas.	3	Leader... GU	18-35	2775	4	Clim.	4-5 1/2 x 6 1/2	G.K	3-4	Toro Cultivator	6-10		3	Leit.	4-4 1/2 x 6	Gas.	2
Boon...	8-16		4	Own	4-3 1/2 x 4	G.K	2-3	Leonard... E	20-30	2530	4	Buda	4-4 1/2 x 6	G.K	3	Townsend...	10-20	1200	2	Own	4-6 1/2 x 7	Ker	2-3
Boon... G	2-4	315	4	Own	1-3 1/2 x 4 1/2	G.K	1	Liberty... A	18-32	2475	4	Clim.	4-5 x 6 1/2	G.K	4	Townsend...	15-30	1800	2	Own	4-7 x 8	Ker	3-4
Best...	30		4	Own	4-6 1/2 x 6 1/2	G.K.D	4	Linn... HAJ	40	4500	4	Cont.	4-4 1/2 x 5 1/2	Gas.	6	Townsend...	25-50	3000	2	Own	4-8 1/2 x 10	Ker	4-5
Best...	60		4	Own	4-6 1/2 x 6 1/2	G.K.D	8-9	Linn... W	60	5100	4	Wauk	4-5 x 6 1/2	Gas.	6	Traction Motor	40-50		4	Own	8-3 1/2 x 5	Gas.	4-5
Boring... 1921	15-30	1850	3	Wauk	4-4 1/2 x 6 1/2	GorK	2	Little Giant...	16-22	2200	4	Own	4-4 1/2 x 5	K.	4	Traylor... TB	6-12	715	4	Leit.	4-3 1/2 x 4 1/2	Gas.	1
Burn-Oil 1921	15-30	1650	4	Own	2-6 1/2 x 7	Ker.	3-4	Little Giant... A	26-35	3300	4	Own	4-5 1/2 x 6	K.	6	Triumph... H	18-36	2450	2	Erd.	4-4 1/2 x 6	Ker.	4
Capital...	15-30	1000	2	Own	4-4 x 6	Gas.	3	Lombard...	85-150		2	...	6-5 1/2 x 6 1/2	Gas.	16	Trumdar... 10	25-40	3750	2	Wauk	4-5 x 6 1/2	GorK	4
Case...	10-18	1090	4	Own	4-3 1/2 x 5	GorK	2	Lombard...	50		2	...	4-4 1/2 x 6 1/2	Gas.	6-10	Turner... 1921	14-25	1295	4	Buda	4-4 1/2 x 5 1/2	G.K	3
Case...	15-27	1690	4	Own	4-4 1/2 x 6	GorK	3	Magnet... B	14-28	1875	4	Wauk	4-4 1/2 x 6 1/2	K&G	3	Twin City...	12-20		4	Own	4-4 1/2 x 6	G.K	3
Case...	22-40	3100	4	Own	4-5 1/2 x 6 1/2	Gas.	4-5	Master Jr...	5-10	585	2	LeR.	2-3 1/2 x 4	Gas.	1	Twin City...	20-35		4	Own	4-5 1/2 x 6 1/2	G.K	3
Caterpillar T11	25		2	Own	4-4 1/2 x 6	Gas.	4	Merry Gar1921	2	230	2	Evin	1-2 1/2 x 4 1/2	Gas.	3	Uncle Sam C20	12-20	1385	4	Weid.	4-4 1/2 x 6	G	2-3
Caterpillar T16	40		2	Own	4-6 1/2 x 7	Gas.	6	Minne... All-P	12-25	1200	4	Own	4-4 1/2 x 7	GorK	3	Uncle Sam B19	20-30	2300	4	Beav.	4-4 1/2 x 6	GorK	3-4
Centaur...	6-2 1/2	455	2	NWay	2-4 1/2 x 4 1/2	GorK	1-9	Minne... Gen.P	17-30	1850	4	Own	4-4 1/2 x 7	GorK	3-4	Uncle Sam D21	20-30	1985	4	Beav.	4-4 1/2 x 6	GorK	3-4
Chase...	12-25	2100	3	Buda	4-4 1/2 x 5 1/2	GorK	2-3	Minne...	22-44	3300	4	Own	4-6 1/2	GorK	5-6	Universal...	1-4	475	2	Own	1-3 1/2 x 5	G	5-6
Cletrac... W	12-20	1495	2	Own	4-4 x 5 1/2	G.K.D	2-3	Mod.Duty	35-70	4800	4	Own	4-7 1/2 x 9	GorK	8-9	Utilitor... 501	2 1/2	380	4	Own	1-3 1/2 x 4 1/2	G	5-6
Cletrac... 40	40	2500	4	Own	4-4 1/2 x 6	Gas.	3	Heavy Duty	8-16	785	4	Light	4-3 1/2 x 4 1/2	GorK	1-2	Valie... Biltwell	12-24	1750	4	Own	4-4 1/2 x 5 1/2	G.K.D	3
Dart... B.J.	15-30	2100	4	Buda	4-4 1/2 x 6	Gas.	3-4	Mohawk 1921	9-18	1075	2	Own	4-3 1/2 x 5	Gas.	2	Victory... 1921	9-18	1350	4	Gray	4-3 1/2 x 5	Gas.	2
Depue... A	20-30	2500	4	Buda	4-4 1/2 x 6	Gas.	3	Moline Univ D	9-18	1075	2	Own	4-3 1/2 x 5	Gas.	2-3	Victory... 1921	15-30	1750	4	Wauk	4-4 1/2 x 5 1/2	Gas.	3
Dill... D	20	2490	4	Cont.	4-4 1/2 x 5 1/2	Gas.	3	Moline Orch.	9-18	1075	2	Own	1-2 1/2 x 3 1/2	Gas.	3-4	Vim...	15-30	1650	4	Wauk	4-4 1/2 x 5 1/2	G.K	3
Dill... R.W.	20	2980	4	Midw.	4-4 1/2 x 6	Gas.	3	Motor Macult.	1 1/2	195	2	Own	1-2 1/2 x 3 1/2	Gas.	3-4	Wallis... K	15-25	1800	4	Own	4-4 1/2 x 5 1/2	G.K	3
Do-it-All...	-7	595	5	Own	1-4 1/2 x 5	Gas.	3	Metex	15-30	2250	4	Buda	4-4 1/2 x 6	Gas.	3-4	Waterloo... N	12-25		4	Own	2-6 1/2 x 7	G.K	3
Eagle... F	12-22	1390	4	Own	2-7 x 8	GorK	3-4	NE... 1	3-6	425	4	Own	2-3 1/2 x 4	Gas.	3/4	Webfoot... 53	28-63	5250	2	Wisc.	4-5 1/2 x 7	G.D	6
Eagle... F	16-30	1850	4	Own	2-8 x 8	GorK	4-5	NE... 2	3-6	425	4	Own	2-2 1/2 x 4	Gas.	3/4	Wellington... B	16-30	1400	4	Chief	4-4 1/2 x 6	Ker.	3-4
E-B... AA	12-20	1545	4	Own	4-4 1/2 x 5	GorK	3	Nichols... Shop	20-42	3100	4	Own	8 x 10	GorK	3-6	Wellington... F	16-30	1400	4	Clim.	4-5 1/2 x 6	G.K	4
E-B... Q	12-20	1000	4	Own	4-4 1/2 x 5	GorK	3	Nichols... 25-50	25-50	3460	4	Own	9 x 12	GorK	4-7	Western... 1920	16-32	2100	4	Wauk	4-4 x 5 1/2	G.K	3
E-B...	16-32	2000	4	Own	4-5 1/2 x 7	GorK	4	Nichols... Shop	15-25	1775	4	Wauk	4-4 1/2 x 5 1/2	GorK	3	Wetmore...	12-25	1650	4	Wauk	4-4 x 5 1/2	G.K	3
Evans...	18-30	2000	4	Buda	4-4 1/2 x 6	G.K	3	Nichols... Shop	20-40	2475	5	Wauk	4-5 x 6 1/2	G.K	4	Wharton... E	12-20	1800	3	Buda	4-4 1/2 x 6 1/2	Gas.	2
Fagot... D	9-12	1525	4	Lyc.	4-3 1/2 x 5	Gas.	2	Nichols... Shop	25-50	3460	4	Own	9 x 12	GorK	4-7	Whitney...	9-18	1175	4	Own	2-5 1/2 x 6 1/2	Gas.	2
Farm Horse B	18-30	1885	4	Clim.	4-5 x 6 1/2	G.K	3-4	Nichols... Shop	15-25	1775	4	Wauk	4-4 1/2 x 5 1/2	GorK	3	Wichita... T	15-30	2500	4	Beav	4-4 1/2 x 6	G.K.D	3-4
Farghar...	18-25		4	Buda	4-4 1/2 x 6	G.K.D	4-5	Oil Pull... K	12-20	1485	4	Own	2-6 x 8	K.D	3	Wisconsin... E	16-30	2250	4	Clim.	4-5 x 6 1/2	G.K	3
Farghar...	18-35		4	Own	4-6 x 8	G.K.D	4-5	Oil Pull... H	10-30	2285	4	Own	2-7 x 8 1/2	K.D	3	Wisconsin... H	22-40	3200	4	Clim.	4-5 1/2 x 7	Ker.	3
Farghar...	25-50		4	Own	4-7 x 8	G.K.D	6-7	Oil Pull... E	20-40	317													

MOTOR WORLD

for
DEALERS, JOBBERS AND GARAGEMEN

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New York, U. S. A., Wednesday, July 20, 1921

No. 3

Getting Ready for Company



**Automotive
Equipment
Sales Promotion
Week
Aug. 6-13**

What the Sales Promotion Movement Means to Auto- motive Equipment Trade

WHEN the Automotive Equipment Association voted \$40,000 to inaugurate a sales promotion movement it wasn't creating a diversion to help its members forget the heat of the Mackinac Island convention. The membership voted the money—\$15,000 out of their treasury and \$25,000 out of their own pockets—because they realized *unanimously* the need for something to put the industry on a merchandising basis.

Nor is the \$40,000 all there is, financially, to the movement. This sum was provided merely to start the plan. Sales promotion has been decided upon as a *permanent function* of the Automotive Equipment Association, which means that this organization of manufacturers and jobbers will have an active, full-time bureau working this year and next year and always, if the plan is successful, to broaden the outlet for automotive equipment products and so increase the profits of automotive equipment businesses all along the line—manufacturer, jobber and retailer and the sales people of all three classes.

THIS is the story of the Mackinac Island convention.

What does it mean to the automotive equipment trade—to manufacturer, jobber and dealer?

And what can manufacturers, jobbers and dealers do to profit by the idea?

Primarily, the movement means two big things to the trade:

1—*Education.*

2—*Co-operation.*

And growing out of these two big things will be better business and more profits for everybody in the business.

NCESSARILY, the promotion idea is fundamentally educational. The manufacturers are not demanding better work on the part of the jobbers without admitting that they need to do better work themselves. The jobbers are not asking for more intelligent and aggressive merchandising on the part

of the dealers without conceding that their own organizations can stand improvement. Obviously the market which must be broadened is the retail market, but the broadening process will have to begin way back at the source of the flow of merchandise—in the sales department of the producer. Likened the channel of automotive equipment distribution to a funnel, with manufactured goods entering it at the narrow end and flowing through to the consumer at the wide end. The funnel must not be bulged out or stove in anywhere along its length. It must have a smooth, even, gradually widening surface, which means that the processes of selling must be developed and improved evenly from the time the product is manufactured until it is put to use by the car, truck or tractor owner.

In the educational plan to be developed the greatest stress will be laid on assistance of the retailer. While the manufacturer and jobber and their sales people are making automotive equipment merchandising their life work and necessarily putting a great deal of time into the study of the subject, the average retailer—automobile or truck dealer or garageman—can treat it only as a part of his business. The sales promotion movement aims to help the retailer become an automotive equipment specialist without giving all his time to the undertaking. In fact, it proposes to give him a great deal of useful and profitable information at very little expenditure of his time, showing him the opportunity for profit in accessory merchandising and showing him how to take advantage of the opportunity by vigorous display, advertising and selling work. It proposes to carry the *better business story* to him through the medium of the jobber and the jobber salesman, thus setting in motion the machinery of education, at one time, for all three classes of workers in the trade.

DEVELOPMENT of the educational idea, in which manufacturers and their sales representatives will be called upon to co-operate with jobbers in their co-operation with retailers, will furnish the groundwork for a new co-operative effort such as the indus-

And What Manufacturers, Jobbers and Dealers Can Do to Profit by the Idea

**Automotive
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try has never known. Properly directed and properly supported, it should increase materially the use of many lines of automotive conveniences and accessories, which means money in the pockets of everybody concerned.

THIS, generally, is the idea, the details of which are yet to be worked out. In the meantime, how can the trade get ready to profit by it?

There are three things for the trade to do:

1—*Get in step with the sales promotion idea by participating in Sales Promotion Week, Aug. 6-13.*

2—*Start housecleaning—bring sales methods, salesrooms and sales equipment up to modern selling standards.*

3—*Get ready, mentally and physically, to work with the sales promotion staff.*

The A. E. A. set aside Saturday, Aug. 6, as Sales Promotion Day and the following week, Aug. 8-13, as Sales Promotion Week, which may best be consolidated into one event, Sales Promotion Week, running from Saturday to Saturday inclusive. This special occasion offers an opportunity to the entire trade to show its *active sympathy* with the sales promotion plan. It can be made a week when manufacturers' salesmen will work just a little harder to place goods in the hands of jobbers and show them how to sell them. It can be made a week when jobbers' salesmen will be more alert and more aggressive in fattening their order books by showing dealers how to fatten their profits. It can be made a week when dealers' stores will be cleaned up and dressed up to attract trade, and when dealers' employees, induced perhaps by special commissions, will work harder than they have been working to get accessories before the eyes of customers and show these accessories' utility, convenience or beauty. It can be made a week which will mark the turning point in the automotive equipment business—the turn toward a higher plane of merchandising and a higher level of profits all along the line.

Country-wide, whole-hearted participation in Sales Promotion Week not only will put profits in the tills

of the participators, but it will show the A. E. A. that the trade is ready and waiting for execution of the sales promotion plan.

And before and after Sales Promotion Week the trade does not need to stand around waiting for the sales promotion staff to get its work under way. There is plenty to be done to get ready for the application of the sales promotion idea. The manufacturer, jobber or dealer who knows there must be a housecleaning of his sales methods and the dealer who knows his store, his shelves, his showcases and his windows need housecleaning might as well **START NOW** to prepare himself to benefit in full measure by the development work to be done.

The manufacturer, jobber or dealer who already has some sales promotion momentum, when the day comes for application of the A. E. A. idea to his business, will get more out of the application than the business man who is standing still. It's easier to speed up a moving vehicle than to start one that is rutted in its tracks.

HOW long it will take the sales promotion committee to engage a staff and get a plan in operation nobody knows. The committee plans to get to work right away and to hold frequent meetings, but at best considerable time must elapse before the trade can have the benefit of the new movement. In the meantime Sales Promotion Week provides an opportunity to let off steam.

Let's not leave the sales promotion idea in the predicament of the swain whose intended bride changed her mind after he had got into his blue serge suit and patent leather shoes—all dressed up and no place to go!

Let's clean house and get ready to work with the sales promotion staff and let's show the A. E. A. we are 100 per cent for the idea by making Sales Promotion Week, in wholesale and retail, a red-letter week in the history of automotive equipment merchandising.

NEXT week in MOTOR WORLD—a different idea in window display for Sales Promotion Week.

Folks and Scenes of Work and Play



THEY WILL DIRECT SALES PROMOTION MOVEMENT

Robert A. Stranahan
*Champion Spark Plug
Co., Toledo*

Howard M. Dine
*Dine-De Wees Co.,
Canton, Ohio*

N. H. Oliver
*Metal Specialties Co.,
Chicago*

L. R. Safford
*McQuay-Norris Mfg.
Co., St. Louis*

W. W. Lowe
*Electric Appliance Co.,
Chicago*

Stranahan, Oliver and Safford, manufacturers, and Dine and Lowe, jobbers, make up the permanent committee named to lay out the sales promotion campaign and engage a staff of men to conduct it. The campaign is intended to assist jobbers and dealers in developing automotive equipment sales and profits.



Standardization Committeemen

L. R. Safford of McQuay-Norris Mfg. Co., Fred R. Hall of Northwestern Chemical Co. and R. A. Picard of A. J. Picard & Co., New York jobber, who have been active in the standardization work



Field Secretary

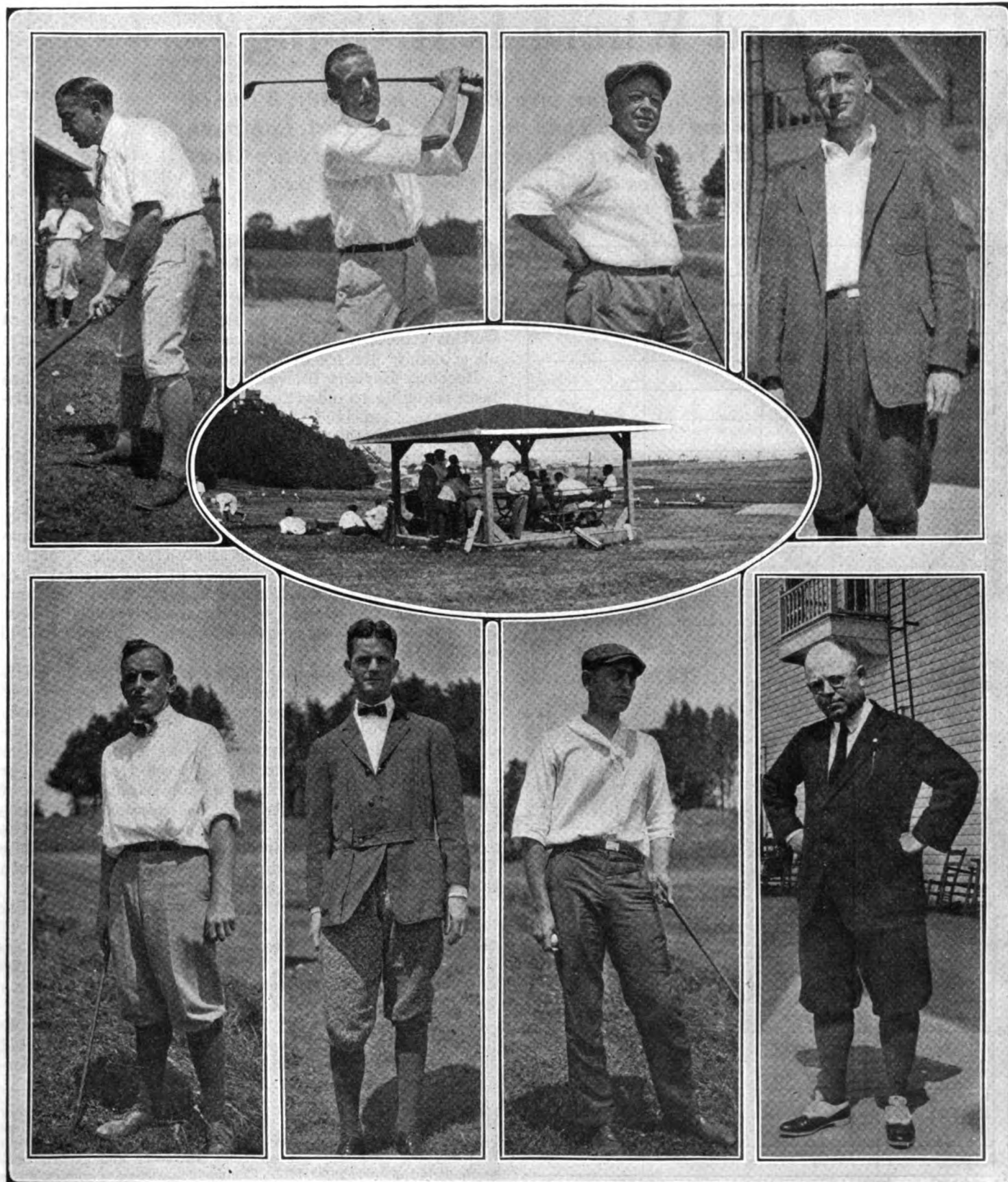
David Rosenbach is on the go much of the time representing the A. E. A. in the field



A. E. A. Secretaries

Albert Swanson and Miss Julia Braatsch handled the secretarial details of the convention

at the Automotive Equipment Convention



The Mackinac golf course, with old Fort George, the village and the bay in the background, was a mecca for the outdoor enthusiasts. In the tournament the winners were: Upper row, left to right: R. A. Stranahan, first; K. S. Byrd of Manhattan Electrical Supply Co., New York, second, in Class A;

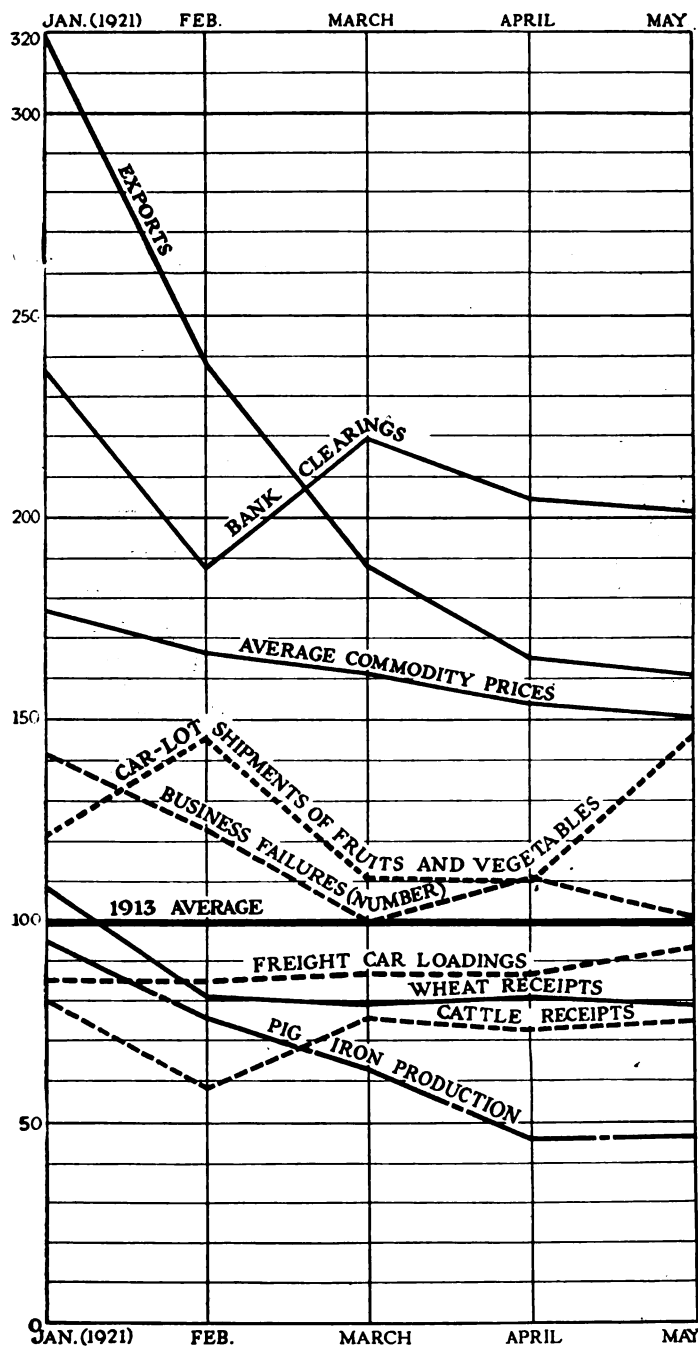
R. R. Englehart of Sleg Co., Davenport, Iowa, second, in Class B; A. J. Grimm of National Lamp Works, Cleveland, first in Class C; (R. W. Smith of Slaymaker Dock Co., Lancaster, Pa., not in the picture, finished first in Class B.) Lower row, left to right: W. J. Heinicke

of L. P. Halladay Co., Streator, Ill., second in Class C; R. G. Stough of National Lamp Works, Cleveland, first; V. T. Salter of Rees Mfg. Co., Pittsburgh, second, in Class D; Fred Campbell of Fred Campbell Auto Supply Co., St. Louis, chairman of golf committee.

How Good Is Business?

And Where Is It Going?

Many Basic Conditions Are Better Than They Were in January and Better Than in 1913, the Last Complete "Normal" Year. But See for Yourself—Study the Chart and Tables on This and the Opposite Page



In this chart the average of each condition depicted in 1913, the last complete year before the World War, is taken as a basis of comparison with the first five months of 1921. The 1913 average is represented by the heavy black line—100. The lines from 0 to 320 show how conditions this year compare with 1913 and how the

ON every side to-day business men hear that "conditions are improving."

They want to believe it. They want to make others, particularly prospects for the merchandise they sell, believe it also. They could convince themselves, as well as others, if they had available what we may term an economic picture of the country as it stands to-day.

Recently Herbert Hoover, Secretary of Commerce, has been reducing to index form business reports from various sources received by his department. Acting in co-operation with the National Conference of Business Paper Editors, of which Motor World is a member, Mr. Hoover has made these indexes available for the information of the American business public.

Motor World has taken these indexes as compiled up to the end of May, has eliminated some of the information not necessary to a general study of the situation, and herewith presents a summary of fundamental business conditions for the first five months of 1921, as compared in most instances with the average monthly condition during the last complete year preceding the world war, that is, 1913.

In the summary, which is tabulated on the opposite page and shown in chart form on this page, Motor World readers will find documentary evidence of the steady improvement in business conditions about which we have heard so much. These figures show an unbroken process of reduction, month by month, since the first of the year in commodity prices, in itself an important evidence of the return to normal. Another basic index of prosperity—transportation—also shows steady improvement, the record of idle freight cars being on the decline, while the average weekly loading of freight cars has been steadily on the gain since the first of the year.

In another basic industry—textiles—we find wool, silk and cotton consumption on the gain since the first of the year and in the woolen industry we find a steady reduction, month by month, in the number of idle spindles and looms. In cotton there has been a slight reduction in stock on hand at mills and warehouses.

On the other side of the picture—and no economic picture would be worthy of attention unless it depicted the unpleasant as well as the pleasant—we find our for-

months of 1921 compared with each other. There are only four major items—bank clearings, exports, iron production and wheat receipts—which have been on the downward trend since the first of the year. Even so, bank clearings are twice and exports once and a half the average of 1913. Commodity prices are coming down—an important index of the return toward normal—while freight car loadings, cattle receipts and fruit and vegetable shipments have been on the upgrade since Jan. 1. The number of business failures has been steadily, though slowly decreasing since the beginning of 1921. Statistics on textiles, too involved for charting, but given in the tables on the opposite page, show an upward trend.

foreign trade both in exports and imports hardly up to the records of the first few months of the year. The key to the falling off in foreign business is seen in the gold movement, our imports being 1010 per cent of what they were in 1913, thus making America the great creditor nation of the world and forcing down foreign exchange to the point where purchase of American goods abroad is almost prohibitive, as every business man knows. This condition has been a parallel factor with reduction of domestic buying power in forcing curtailment of American manufacture and unemployment in American mills.

Business done in wheat, corn and cotton also has decreased since the first of the year, but carlot shipments of fruits and vegetables have been on the upgrade, and the general composite condition of American crops is

93.2 per cent of what it was in 1913, indicating among other things that we shall not starve.

We find live stock business showing a slight decline since the first of the year. In metal and metal products, comprising a group of industries which were among the last to feel the heavy hand of readjustment, the index shows a steady decline since the first of the year both in production and foreign trade.

In the banking and financial world there has been a slight decline in the volume of bank clearings, though the figure for May is twice that of an average month of 1913. The number of business failures has shown a considerable decrease, month by month, throughout 1921, while the aggregate liabilities in these failures have remained about the same.

Now let's study the statements below.

Comparative Statement of Business Conditions in 1913 and 1921

In the tables given below, as in the chart on the opposite page, the average of each condition for 1913 (100) is the basis of comparison and the index figure for each month of 1921 shows how that month compares with the average month of 1913. The figures for the months of 1921 also show in detail the upward or downward trend this year of each business condition analyzed.

BANKING AND FINANCIAL

	Bank Clearings	BUSINESS FAILURES		New Capital Issues	New Incorporations	N. Y. STOCK EXCHANGE SALES	
		Number	Liabilities			Stocks	Bonds
1913 Average...	100	100	100	100	100	100	100
1919 Average...	...	...	...	...	...	...	...
1921 January...	237	142	229	102	118	231	708
February...	188	123	268	119	62	147	539
March...	219	100	297	55	90	230	545
April...	204	111	170	155	94	221	553
May...	202	101	251	71	57	246	581

METALS AND METAL PRODUCTS

	Pig Iron Production	Steel Ingot Production	Iron and Steel Exports	Copper Production	Tin Stocks	Tin Consumption
1913 Average.....	100	100	100	100	100	100
1919 Average.....	95	87	235	67	155	43
1921 January.....	76	69	169	64	138	43
February.....	63	62	99	67	192	46
March.....	47	48	70	35	188	43
April.....	48	50	...	...	132	...
May.....	...	...	...	...	...	...

PRICE INDEX NUMBERS

	WHOLESALE PRICES OF									FARM PRICES OF				FARM PRODUCTS			
	Farm Products	Food, etc.	Clothes and Clothing	Fuel and Lighting	Metals and Metal Products	Building Materials	Chemicals and Drugs	House Furnishing Goods	All Commodities	Retail Prices of Food	CATTLE*		Livestock	HOGS*		Receipts	Slaughter
											Crops			Shipments			
1913 Average...	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1919 Average...	136	162	208	228	152	239	182	283	177	172	129	120	120	80	87	139	119
1921 January...	129	150	198	218	146	222	178	277	167	158	123	117	117	58	64	116	103
February...	125	150	192	207	130	212	171	275	162	156	120	123	123	76	83	106	84
March...	115	141	186	199	138	203	168	274	154	152	113	112	112	73	78	95	83
April...	117	133	181	194	138	202	166	282	151	145	104	109	109	75	81	87	80
May...	...	...	...	...	...	...	...	...	...	...	109	...	...	...	...	...	...
June...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

*Based on the movements at 68 markets.

TRANSPORTATION

	Surplus Freight Cars at End of Each Month	AVERAGE CAR LOADING PER WEEK						
		Grain and Grain Products	Livestock	Coal	Forest Products	Ore	Mdse. Less than Carload Lots	Total
1919 Average...	100	100	100	100	100	100	100	100
1921 January...	153	103	96	99	79	24	119	85
February...	195	94	86	84	94	24	128	85
March...	234	95	79	75	90	18	146	87
April...	227	86	82	74	84	15	150	87
May...	186	91	80	87	87	59	132	93

FOREIGN TRADE MOVEMENT

	MERCHANDISE		GOLD		Tonnage Cleared
	Total Exports	Total Imports	Exports	Imports	
1913 Average.....	100	100	100	100	100
1919 Average.....	...	...	...	...	...
1921 January.....	319	140	42	662	109
February...	238	144	16	767	98
March...	188	169	11	1763	105
April...	165	170	6	1529	117
May...	161	139	16	1010	118

FARM PRODUCTS

	WHEAT		CORN		COTTON			Car Lot Shipment of Fruit and Vegetables	Composite Conditions of All Crops
	Receipts	Visible Supply	Receipts	Visible Supply	Visible Supply	Exports	Imports		
1913 Average...	100	100	100	100	100	...	...	...	...
1919 Average...	...	...	...	...	...	100	100	100	100
1921 January...	108	83	189	146	157	79	118	122	...
February...	81	75	128	226	153	64	138	146	...
March...	79	40	159	322	146	49	134	111	...
April...	81	47	57	233	145	42	92	110	...
May...	79	30	84	162	147	62	52	147	...
June...	...	...	...	...	...	...	...	...	93

TEXTILES

	Wool Consumption	Total Idle Spindles, Wool	Total Idle Looms, Wool	Silk Consumption Relative to Feb. 1920	Cotton Consumption	Cotton Stocks in Mills	Cotton Stocks in Warehouse
1913 Average.....	...	100	100	...	100	100	100
1919 Average.....	100	...	...	...	...	...	...
1921 January.....	52	190	220	74	75	98	320
February...	110	176	212	55	81	102	311
March...	83	138	172	85	90	102	296
April...	93	93	144	96	84	101	285
May...	...	62	108	90	90	98	268
June...	...	52	88	...	...	...	...

Traffic Cops Are Needed When This Dealer Displays Cars

The Story of How a Kansas City Dealer Has Succeeded in Making People Look THROUGH Not Just AT His Plate Glass Front—How the W. C. Howard Motors Co. Is Attracting Prospects and Selling Cars with Window Displays

GIVEN a large expanse of glass frontage for display purposes—
What is the motor car dealer to do with it?

The big windows represent not so much investment as opportunity. Surely there is some way to cash in on them, besides displaying nice looking cars, that at a distance of a hundred feet look a good deal like any other cars.

The W. C. Howard Motors Co., Kansas City, has an unusually broad expanse of windows. And it has cashed in on them, this spring and summer.

This spring and summer! Window displays have sold motor cars!

Let's hurry up and find out how the company did it.

FIRST, though, a word or so about the company's location, and the point of view on the use of the windows. The building houses both the sales and service departments; and is situated at Nineteenth and McGee Trafficway—street cars running on Nineteenth, and the trafficway being one of the most traveled thoroughfares of Kansas City.

The company was getting much value from the windows just because they were large; people passing gained a favorable impression of the establishment, because it looked imposing and what could be seen of the salesroom was attractive.

But nobody got off the street car, or stopped a motor car, to come into

the place, or to view the interior more closely, without some other reason than the appearance of the fine display of motor cars.

The company this spring began to use the opportunity, to cause people to stop their motor cars, and to come closer to the windows to look in. And it was discovered that *nine-tenths of the value of the window is in getting people to stop.*

When people have stopped to look, the chances are in favor of the good prospects among them being influenced to enter the salesroom.

And here is a real discovery as to how to get people to stop:

Put into the window something they can see from the street.

It is not enough to have a fine display on the floor. If the passersby can't see it plainly enough to be attracted, it is practically useless.

Many dealers can probably report that there is so much glare on their display windows that the interior cannot be clearly seen. It is the exceptional case that the daylight, and the glass, are of such nature that passersby can get any but a vague notion of the display.

It is because of the apparent hopelessness of attracting attention of motorists or street car riders from the middle of the street that dealers are willing to cover their windows with splashes of paint announcing what they have within.

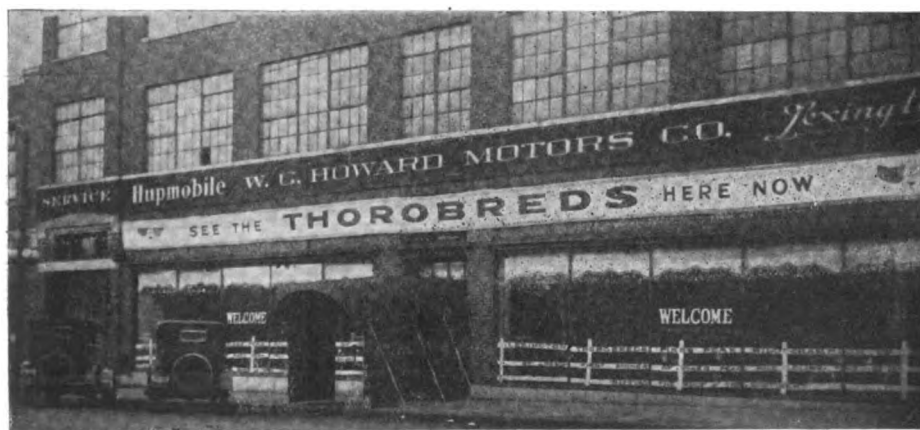
The Howard company has solved this difficulty, and at the same time has made its windows *selling windows*. It has attracted attention, and then given the attention something to interest it.

The overcoming of the handicap of glare which prevented interiors being seen came about as a result of a display for "Thorobred week" for the Lexington car. A very elaborate display had been arranged. The north half of the sales floor, at the corner, had been equipped as a live stock show. There were champion cows, horses, hogs, chickens and dogs, with blue ribbons, and placards showing where the awards had been won—and one of the Lexington Thorobreds, with its record, too.

This was a wonderful display, intensely interesting; full of life, and remarkably apropos of the subject.

A fine display—if only people knew it was there! But thousands passed

A White Fence Made People Look



The W. C. Howard Motors Co. had a very elaborate and expensive display of blue-ribbon live stock, incident to the display of the Thorobred Lexington. But few could see this display from the street, because of glare on windows. A white fence painted on the inner surface of the glass window, did the job of attracting attention, people looking over this fence into the barnyard scene, were attracted to the salesroom.

oblivious to the exhibition, because they could not see enough of it to excite their interest.

R. W. Conant, wholesale manager for the company, solved this problem the first day. And thereafter a traffic squad was supplied by the police department to keep motor cars lined up, and starting, from in front of the establishment.

And what he did was simple enough.

He had a rough-looking farm fence painted, in white, on the inside of the glass windows.

This captured attention, and a surprisingly large number of motorists stopped their cars and got out to investigate further.

The value of this painted fence was not that it was a fence, but that it was a part of the display. People who approached, looked over this fence at the livestock. They were, first, interested in the fence; and when this interest was fully met by the farm scene behind it, they were so much the further interested.

And this fence fit with the big sign over the entrance—"See the Thoroughbreds Here Now." When the people looked over the fence and saw the champion livestock, they felt that the invitation and their attention had been justified—and they were so much the more favorably disposed to consider the Lexington appropriately grouped with the blue ribboners.

A second problem of attracting attention of people passing arose when the Lexington "Lark" display was planned. The Lark might have been beribboned and decorated, and set alone in the middle of the floor, with a good background. But the people in the street would not have seen it, except perhaps at night.

The incidental campaign to introduce the Lark had points of value, the whole campaign leading up to the window display. For two weeks "teaser" copy was run in local papers, three-inch single column space; in part of the copy only a large question mark was used, and in others, the word Lark, and some suggestive phrase, as "Have you seen the Lark?", "Are you planning a Lark?", "What is the Lark?", "Where is the Lark?"

There was only one hint in all Kansas City as to what this "Lark" might be, or what the advertisements referred to—and this was a great question mark, exactly the shape of that in the advertisements, on a curtain that covered one of the windows of the W. C. Howard Motors Co. This curtain naturally attracted attention and aroused curiosity.

When it was drawn a picture was revealed that drew far more attention than could a car.

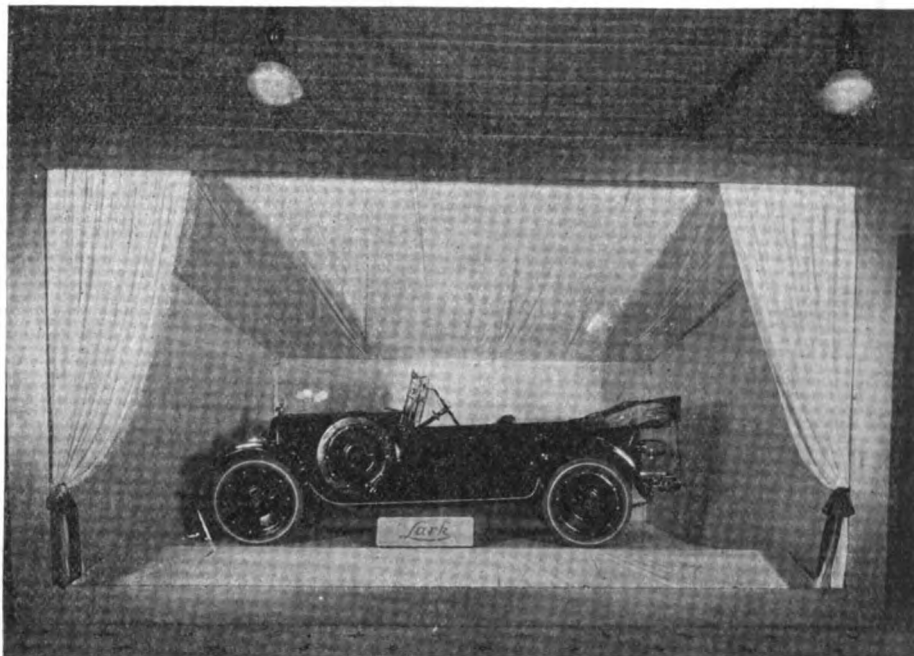
In the window was a great frame

of gold—a frame 22 feet long and 12 feet high. Curtains of white goods were drawn back as from a window, held by purple ribbons. A room was disclosed, lined with white, and on a pedestal was the Lark, its purple body and red disk wheels gleaming under the light from concealed globes. These globes were amber—a detail—but an

at 30 miles an hour, and upon reaching the Howard block there would be a screeching of brakes, as they were attracted by this glowing picture in the window. Until traffic officers got busy there were many bumps caused by these sudden halts of fast-moving cars on the trafficway.

One salesman sold three Larks the

A "Teaser" Advertising Campaign Preceded This Display



The Lark, as displayed on the "opening day" for this new car, in the windows of the W. C. Howard Motors Co., in a gold frame, white-lined room, with amber light from hidden sources at the bottom of the frame. This framed car, as illuminated, did the business of causing motorists to stop and to give their names to salesmen at hand to glean prospects from among the spectators

important one for securing the most gratifying illumination.

The part of the salesroom in which this frame stood was curtained from the rest and dark, so that the picture in its frame stood out boldly—and was strikingly conspicuous from the street. It was shown for three nights and days. *And the traffic squad was again requisitioned to help keep traffic moving smoothly on McGee.* Motorists would come whizzing down McGee

second day of the display; one man got sixteen live prospects, and there were other sales and definite results from the care taken with this incident.

The frame cost a hundred dollars or more, and considerable trouble. But it paid for itself many times over.

The painted fence of the first-described window did not cost much—but it gave the value to the thoroughbred exhibition which was somewhat costly.

Peppery Sales and Service Points

UNDER a heading "Throttle Throbs," Albert Elton, Cadillac distributor, publishes in his November house organ for the Elton Motor Co. the following peppery pointers for sales and service staffs:

"Sales don't turn up in this world until some salesman turns them up.

"While some are considering when to begin it is often too late to act.

"Weak salesmen wait for sales; real salesmen make them.

"The salesman who is good at excuses is good for nothing else.

"One to-day is worth two to-morrows.

"The secret of successful salesmanship is to know when the prospect will put his name on the dotted line.

"Civility and courtesy cost nothing and buy everything.

"During this reconstruction period do not hang a crepe on your face and deal out gloom and grief in your conversation.

"No thoroughly occupied salesman has ever yet run out of good live prospects.

"Success in salesmanship treads on the heels of every genuine effort."

Who Will Help?

N. A. D. A. Starts Campaign for Pueblo Relief Fund

ST. LOUIS, July 14.

A CAMPAIGN for financial relief for the automotive dealers in Pueblo who were wiped out by the recent flood has been undertaken by the National Automobile Dealers Association

in an announcement made to-day by Jesse A. Smith of Milwaukee, president of the N. A. D. A. The N. A. D. A. started the fund with a contribution of \$100.

Immediately upon receipt of the notification from President Smith, General

Manager Harry G. Moock sent a notice of the N. A. D. A. action to all motor and trade associations in the country asking them for contributions. Moock's appeal follows:

"Full accounts of the terrible havoc wrought by the flood waters of the Arkansas River in Pueblo are reaching this office, particularly as it concerns those who are engaged in the selling, distributing and repairing of automotive equipment.

"A. V. Fagerstrom, president of the Pueblo Automotive Dealers' Association, reports in a letter that the loss to those engaged in the automotive industry in his city totals about \$237,000 in actual investments, not to mention the loss in new business.

"Dealers with well established lines are being taken care of generally, but the smaller merchants are having quite a strenuous time of it, due to their investments being entirely wiped out.

"For these men there is a special appeal being made by those in close touch with the situation. Unless help reaches those who are part of this industry and comprise the smaller establishments (and with no further loss of time) their fast ebbing morale will be gone, also their hopes for again starting in business.

"It has been suggested that if all the regular organized associations will, as associations, donate sums from \$50 to \$200, a sufficient sum of money will be made available for those whose need is most paramount and enable them to again take their place in the industry.

"The N. A. D. A. is starting off the subscription list with \$100 and will attend to the details of having a proper committee of well known dealers appointed who will attend to the distribution of the money and who will make a report of their trusteeship, so you will be advised what has been subscribed and how it was expended.

"With some moral aid, as well as such financial aid as we will be able to muster, those automotive merchants who are daily digging their way out of the mud, slime and debris will be able to take new hopes and get going once more.

"Quick action is necessary. Please do not delay. Bring this to the attention of your board of directors and forward your check to the Pueblo Flood Relief Fund care of the N. A. D. A. headquarters, 320 North Grand Avenue, St. Louis. Individual subscriptions will be acceptable as well as association donations. No amount is too small. If everyone will just help out a little, in the aggregate it will be a big help.

"Just consider—had it happened in your city.—Harry G. Moock."

Let's Help Get 'Em Going Again!



Here are two pictures of the havoc wrought by the recent Pueblo flood. The Pueblo Automotive Dealers' Association reports that the loss to those in the automotive industry in the city will exceed \$237,000 in actual investments. In a half hour the Automotive Equipment Association, at its recent convention, raised \$17,000 for one dealer in accessories and tires. What are the dealers of the country prepared to do to help keep the automobile dealers and garage men in the territory in business? Read this story

Sell or Smell

In Which Reilly Talks About a Fragrant Truck Sale

By RAY W. SHERMAN



HEVITT, manager of the truck department, was wondering if the business men in and about Callawassa would ever again buy Sayanna trucks from C. J. Reilly, Inc., and he wiped beads of moisture from his brow and pondered long and hard before he ambled into Reilly's office to request a consultation on the destiny of the truck department.

Reilly was feeling fine this morning. The town was loosening its hold on its money and taking a renewed interest in the Sennett car. The salesmen were all feeling fine, and with the breaking of resistance to sales they were going faster than ever despite the weather. The advertising and persistent sales work during the months gone by was bringing its return.

"That's fine!" enthused Hevitt, as he heard the report of growing business. "But I can't say as much for the truck department."

"How come? How come?" laughed Tommy Trumbull, manager for Reilly. "I thought the truck was the world's greatest essential."

"It is," smiled Hevitt, "but it seems harder to sell folks things their merchandise is carried in than the vehicles they ride in themselves. The contractor doesn't seem to have any feeling at all for his crushed stone as long as he has shock absorbers on his own car. You see, this fellow—"

"Oh, by the way," Reilly interrupted. "Here's something a truckman told me the other day and I promised him I'd tell it to you."

"A secret?"

"He thinks it has been but he doesn't want it to be any longer," Reilly replied. "He says he doesn't like some of your customers."

"HE doesn't like MY customers!" Hevitt exclaimed. "What does he care who my customers are? He doesn't have to associate with them, does he? What business is it of his?"

"Well," Reilly explained, "he seemed to be very much interested in the subject, whether he has a right to be or not."

"Humph!" grunted the truck sales manager.

"He said you had been making some

undesirable sales in Callawassa," Reilly resumed.

"UNDESIRABLE!" exclaimed Hevitt. "What does he mean?"

"I'll tell you his story," said Reilly, "and you can decide for yourself how much sense and justice there are in it. Here's what he says. He says you don't care whom you sell your trucks to and that you've put some Sayannas in the hands of some men who have no more license to own a truck than my little boy has."

"Is that any of his business?"

"Wait till you hear his story," cautioned Reilly. "As you, of course, appreciate, this truck owner is one of our best customers. He has a fine fleet of Sayannas and probably will buy more as he needs them for expansion and replacement. He keeps them painted and in good mechanical condition and they are something we can be proud of. He is a great advertising asset for us. He has built one of the largest commercial hauling businesses in this section—and he's going to be bigger."

"And now, here's what he says. He says you dug up, as a prospect, a fellow who was using one horse and a wagon for local carting work and sold him a truck. He says you promised this little one-horse truckman you would lend him assistance in getting work to keep his truck busy. He says this little one-horser didn't get business enough to feed a horse, let alone run a truck, and that he has been demoralizing the trucking industry of Callawassa by doing jobs at prices below cost and upsetting things generally. He says the little man will soon be so far in the hole he'll have to sell the truck to pay his bills and that there will then be a stray Sayanna wandering about town, which will be no credit to C. J. Reilly, Incorporated."

"Meantime, he says, the little truckman has shot the trucking business all to pieces, made a general nuisance of himself and the only mission he has filled in life has been to furnish one record for our sales sheet—which record doesn't mean much of any profit for us. And there you are."

Hevitt had little to say. Reilly continued:

"I think there's some sense in what

this truckman says. I think there are some sales we might just as well not make. If a man can't use one of our trucks with profit to himself I don't think it is good business to sell one to him. Especially do I believe we should avoid these sales to these poor little fellows who have no money, not much business ability and little excuse for having a truck. It probably is easy to sell them, but they're just as well not sold."

"We've got to exercise some judgment in selling trucks, Hevitt, if the Sayanna is ever going to amount to anything in Callawassa, and we might learn quite a lot if we would just keep in touch with all of our owners and get all their slants on how we do business."

"It was rather a shock to me to learn that some of our best customers are in the habit of getting together in their association meetings and talking over all of us truck dealers. They rake us over the coals for anything they think isn't right, and if any one dealer is too rotten in his methods the fact gets ample publicity. On the other hand, the good dealer gets good advertising. These fleet owner fellows are an up-and-coming bunch and are rather proud of the fraternity of trucking. They are getting closer together every day, just the same as the dealers in Callawassa and many other cities have been getting together for years. That's one reason they don't like to see trucks sold to buyers who aren't eligible for membership in an association of reputable business men."

"You know, Hevitt, I think there is some merit in using discretion as to our buyers. There are sales that sell and sales that smell. There are sales that sell other trucks and sales that kill sales simply through the character of owner we have sold to. I would rather have a fine flock of Sayannas in Callawassa than a bunch of trucks in the hands of owners who didn't stand well in the community. The principal thing this man objected to was the undue effort on the part of some dealers to get trucks into the hands of little fly-by-nighters who simply disrupt the trucking business and hurt all concerned. I told him I'd tell you—and I've told you."

"And I heard it—the very first time," said Hevitt.



Dollar Ideas

Earn a Dollar

MOTOR WORLD will pay \$1 each for ideas for this department. The ideas should have to do with sales and business management. The idea should be in two parts:

- 1—The problem.
- 2—The solution.

But if you'll get the idea on paper in any fashion whatsoever, we shall be glad to shape it up for you. Do two things:

- 1—Help some other man.
- 2—Make a dollar for yourself.

How One Dealer Reduces Demonstrator Mileage

THE "top-notch" life of a demonstrating car is so short that one Cleveland dealer in a \$1,475-\$2,350 line has devised a plan to reduce the "mileage per prospect" on his demonstrators. A black-board chart in his private office shows graphically the monthly total mileage of each salesman in proportion to the number of demonstrating runs made by him. Records are made from uniform printed mileage report cards carried by each salesman and verified and punched nightly by the sales manager. Over a brief period, results might not be a true gauge of ability to sell without long demonstrations, especially when prospects are slow to reach the "dotted line" stage. Therefore, the dealer has inaugurated quarterly contests in this procedure, for the number of hard and easy prospects per salesman are fairly uniform in a three-month stretch. Cash bonuses of \$50, \$25 and \$15 respectively are awarded to the three men making the lowest demonstrator mileage per car sold. A man must sell at least five new cars in three months to be eligible. In the past nine months, the plan has reduced demonstrator mileage about 35

per cent, kept the cars in better condition, and a different salesman has "cashed" first prize in each contest.

Stage Folk Help Get Publicity

MANY motor car dealers are supplied with pictures and publicity material concerning actors and actresses who use the car handled by these dealers. Ordinarily, the dealer can use such publicity only in a limited way, usually securing a single insertion of the picture in a newspaper. It doesn't seem to be the sort of material adaptable for local advertising.

The W. C. Howard Motors Co., Kansas City, has taken this idea, however, and is adapting it to local purposes. The company is furnishing moving picture and other stars visiting Kansas City with Lexington cars for use during their stay; and is getting good publicity from the practice. When it happens that the actor is a Lexington owner, the publicity is all the more valuable.

This was the case with Jack Hoxie, who wrote a valuable letter telling of his ownership, to the Howard company, that is being used effectively in Kansas City.

Movie Star Used by Kansas City Dealer



This is not a factory picture, but a picture of Jack Hoxie and the Lark provided for his use while in Kansas City by the W. C. Howard Motors Co., which is thus capitalizing for its sales purposes the publicity given the moving picture star

Taxicab Operators Are Good Accessory Prospects

AS the result of an "object lesson failure," a Cleveland accessory dealer has gone after and secured more trade among taxicab and livery proprietors. These owners are paying increasing attention to comfort, appearance, economy, and safety accessories of all kinds, and in cases where a fleet of cars are to be uniformly equipped with some such items as shock absorbers, tonneau windshields, gauge-equipped inner tubes, gasoline filters, parking lamps, seat covers, windshield visors, fire extinguishers, etc., there is a "volume profit" in the order that merits special effort by the accessory dealer. Recently a fleet of small, low-fare taxicabs in Cleveland have been equipped with highest-grade shock absorbers ordered through a large Eastern jobber. For this single equipment item, the taxi firm paid 8 per cent of the new cost of each cab. Their purchasing agent said he had been rarely canvassed by retail accessory dealers, and never had any offer from them on a high-grade shock absorber. In this dealer's opinion, it is time for the enterprising accessory dealer or garage handling accessories to cater to this class of trade, lest it be usurped by jobbers or manufacturers searching for a "line of least resistance."

This Dealer Buys Tourist Information

MANY of the most enthusiastic tourists depend on motor clubs for route, hotel and garage information, and often their inquiries are made sufficiently in advance of departure to permit a garage or accessory dealer to solicit a service or equipment order which will add to the comfort or satisfaction of the trip. Herbert Brownlee, manager of Saffold Garage, Cleveland, has utilized this opportunity by paying two clerks of local club touring information bureaus 15 cents for each name and address of such tourists, and 50 cents for each pack of 20 cards of Saffold Garage distributed among the same. A special form letter for tourists was prepared, emphasizing accessories having the strongest appeal for them and also the facilities for

prompt and complete repair and replacement and convenient transient storage and washing. If the garage has a downtown location, the arrangement might well be extended to include a few hotel clerks and other employees, particularly in distributing cards.

Standardized Service Talk

WHAT do your salesmen talk about when the subject of service is mentioned in their selling efforts? What do they promise? What features of your service that you think are particularly important do they fail to mention?

The White Motors Co., Studebaker and Peerless dealer in New Haven, knows that its salesmen are making no extravagant promises, yet thoroughly selling its after sales service, because it has supplied each salesman with a standardized service selling argument which he is required to use. The idea was developed by W. A. Rutz, general manager, who first summed up his ideas on the subject and presented them at a sales meeting to his salesmen. Each of the salesmen then were asked to tell some of the things he emphasized in selling his prospects. These were carefully noted, and then from the interchange of ideas came the standardized service sales talk, entitled, "Service Counts Most," which was adopted as the model and copy supplied to each salesman. Later this company plans to print the talk in pamphlet form for distribution among prospective buyers and for use when circularizing prospect lists.

Endorsement Payments Make Car Prospects

WHAT endowment policies become due and are paid in your city? When a man in the forties or fifties secures an endowment policy and has a family but no automobile, it is the most natural thing in the world for him to put some or all of the money thus received into a car. So it would be a wise move for the car dealer or salesman to keep in touch with the local insurance agents and from them to obtain information concerning endowment policies that are due and payable, and to then solicit the fortunate holders of these policies. Quite a little business can be worked up in this way, a Fort Wayne dealer has learned.

Automobile Trip Gets Publicity

ANORTHERN Indiana dealer secures a lot of very valuable free publicity every Sunday in the leading local newspaper by the simple expedient of each week taking the automobile reporter of the paper on a ride through the country for the purpose of mapping out a good Sunday afternoon drive for motorists. Of course, the reporter in writing up the trip always mentions the dealer and the car he is selling, and as the map is eagerly sought by many of the city's motorists, the dealer in this way gets his name and the name of his car before a great number of people each week.

Making Service Sell

THE C. C. Coddington Co., Inc., distributors of Buick cars, aim to make their service department their greatest selling agent. "The average cost of this service," an official of the company says, "does not equal the usual salesman's commission, but it makes a salesman out of every customer."

The retail department has a superintendent of service stationed in the

carrying out a replacement guarantee for 12 months by the dealer.

This service gives a complete record for 12 months of service cost, what the owner has been charged for, and what has been assumed by the company. The majority of the car owners, after 12 months of this service, ask to be continued for inspection at the regular charge rate.

The system makes possible a minimum sales force. The service department sells

Who's Selling Cars—Would You Like to Know Every Day?

AUTOMOBILE PUBLISHING CO.

DAILY AUTO
REGISTRATION
TELEPHONE:
PICO 3640. HOME 12066

Successors to
DAILY AUTOMOTIVE NEWS & AUTO LIST CO.
927 South Hill St., Los Angeles, Calif.

COMPLETE
LISTS
ANY CAR
ANY COUNTY

ADDRESSING MULTIGRAPHING - CIRCULARIZING - ETC.

JUNE 1, 1921.

NEW CAR LIST

PAGE 1.

LO Designates Legal Order

		Pneumatic Tires	
		LOS ANGELES	CITY
532-914	Goss Geo G	954 W Oxford Ave	Chalmers Spt 31606
533-079	Shields L B	1027 Lincoln	Chand Disp 100496
533-026	Dernier Floyd A	3443 4th Ave	Chev Cpe 65686
533-020	Dunlap G M	407 S Hope St	Chev Fd E18241
532-961	Baker Helen R	306 Cits Nat Bk Bldg	Chev Sdn E15273
533-099	Pagliusi Antonio	310 W Hill St	Chev T E18606
533-025	Dernier Miss E M	3443 4th Ave	Chev T 82325
532-912	Martin C W H	817 N Douglas	Chev T F18941
532-982	Leonard R F	832 W 92nd St	Chev T 20068
533-002	Baughman Chas S	4344 Russell Ave	Clove T 17524
533-097	Gallagher H R	6015 Brighton Ave	Columb T 41471
533-022	Hunter T Mayes	2439 10th Ave	Cunningham T V2512
533-066	Barkley D W	717 Madison	

This is the sort of information California automobile dealers are getting every day from a list company which compiles the information from daily postings of registrations by the Motor Vehicle Department. The company also furnishes to its subscribers a monthly tabulation of registrations by towns, counties and by totals for different sections of the State.

Would it be worth while to consider means of obtaining this information in your own territory?

shop. His salary is charged to sales expense and his duties are to assist the salesman in closing the sale and in making delivery of the new car to the customer. In this way he becomes acquainted with every new car from the beginning. When the new car is billed a monthly inspection record blank is filled out and sent to the service superintendent. This becomes his permanent record on the car and is carried in an index binder, with all information about the car service.

Once a month the customer is notified to bring his car in for inspection, notice being given either by telephone or by mail. If trouble develops and the owner brings his car in before he is called, a record is made of the visit. If the owner fails to report to one call, he is advised on his next visit that these inspections are necessary to minimize the cost of his service, and inasmuch as he has failed to respond, a certain part of the liability under the guarantee must necessarily rest with him.

These monthly inspections include a general looking over of the car, tightening up of loose parts, adjustments, etc. Of course, for new parts, oils, etc., used, the owner is charged for them unless old parts are defective, in which case no charge either for parts or labor is made,

more cars through the recommendation of owners than any one, or possibly more, salesman could sell without the service.

This License Service Was Effective Advertising

AS the time for new license numbers drew near, a North Carolina dealer obtained a supply of application cards and posted placards in his windows announcing:

We look up your serial number and fill out your application for license free

As many people do not know where to look for serial numbers, others don't like to because it's dirty work, the sign drew all classes to the garage to get application cards properly filled out. A salesman always looked up the serial number and did not fail to get in a word with the owner about a new car, a set of tires, an overhauling job, or whatever the respective car seemed to suggest. It proved to be good advertising, getting the salesmen in touch with many new prospects, and with no cost except a little time and few postage stamps to mail the cards with.

Editorial Observation

Close Buying—Close Allowance

THE predominant feature of to-day's used car market is close buying. Demand for used automobiles is reported good in all sections of the country where general business is on the gain. The public in large numbers want used cars and sales are running strong, but in practically all transactions the buyer is demanding a rock-bottom price and is shopping around until he is convinced that he is getting it.

Under the circumstances, dealers must buy their stocks of used cars as closely as their customers insist on buying from them. Guessing at resale values, always a dangerous practice, is doubly so in a period like the present when the public is weighing every dollar before it spends the money on any sort of merchandise. Dealers cannot avoid losses on used car stocks when new car prices are reduced, but they can hold down to a minimum losses occasioned by over-allowances on trade.

The demand of the day, if dealers are to make their used car departments profitable, or at least self-sustaining, is for more careful appraisal of cars offered in trade. The new car purchaser will always get as much as he can for his old car and frequently he will shop about from salesroom to salesroom looking for the highest price. Eventually, however, he will buy the car he wants and he will turn in the old car at a price which the dealer insists is equitable. If the dealer, through lack of judgment of the used car market, or through carelessness in appraisal, allows the customer \$100 or several hundred dollars more than his old car is worth the customer of course will offer no protest and his chuckles of satisfaction will be reserved for enjoyment when he is out of hearing distance of the dealer's place of business.

Dealers may as well make up their minds that as long as the public retains its present attitude of hugging every dollar it spends before kissing it good-bye, used cars will be bought with extreme closeness. Equally close, therefore, must be the trade-in allowance of the dealer who is going to avoid damaging and possibly disastrous loss through used car transactions.

It Pays to Advertise

FIFTY San Francisco civic and business organizations have approved the movement for a bridge across the bay, advocated by the Motor Car Dealers Association of San Francisco as a necessary improvement to meet the transportation needs of the community. Incidentally, 5000 inches of newspaper comment on the bridge project have been printed in the past three weeks in San Francisco and vicinity journals.

The bridge plan, brought forward by the dealers in a six weeks' advertising campaign, has become the talk of San Francisco, has raised the automotive merchandising companies to a new plane in the estimation of the community and has had a stimulating effect on business.

How many other communities need an additional transportation outlet? In how many of these communities are the automobile dealers ready to help themselves, and their home towns, by sponsoring the improvement?

The Community Garage

DEALERS in cities where the garaging problem has become a considerable factor in sales resistance might do well to look into the possibilities of community garage development. In some cities, Philadelphia among them, this idea has been carried forward with satisfaction to automobile owners and with relief to dealers from the sales resistance due to high garage costs imposed on motorists. These community garages give the car owner a private garage without the carrying charges on an individual building. At the same time he is saved the high rental which often prevails in public garages with expensive equipment and operating personnel.

When live storage space in garages runs to \$30, \$40 and \$50 a month, as it does in some sections of New York, it is obvious that persons of moderate means, who otherwise would purchase moderate priced cars, will remain out of the market. This limits sales to people of wealth and to those who live away from the apartment house districts and have their own garages. It will be found that the community garage, with privately controlled stalls for individual car owners, will in many cases meet the needs of this middle class of motorists.

AUTOMOBILE dealers should not forget the facilities afforded by the American Automobile Association and its various affiliated clubs throughout the country to stimulate interest in touring and so to promote sales. The "3 A's" is ready at all times to serve the motoring public in the matter of road maps and general information about touring conditions, and many an automobile vacation or tour could be made pleasanter and the participants in it greater enthusiasts for motor car traveling if they had the benefit of the thorough knowledge on touring conditions made available through the "3 A's." Recently the association asked automobile manufacturers, and through them dealers and salesmen, to urge their customers to make the fullest possible use of the facilities of the organization. Are you doing it?

WE must come out and stand up boldly to justify profits; profits, like the magneto in a motor car, the one thing which through the ages has been the incentive to activity and the incentive to production. To suggest that civilization can continue without profits is in my humble judgment to suggest that which is totally false. In a free market the profit is the cheapest of the items that go to make up the cost of an article. Profits may be defined as a commission on economy, and no form of control yet discovered has proven half as economical as the most rapacious profiteer.—Ernest G. Benn, of Benn Bros., Ltd., British business paper publisher.

LETTERS *from* READERS

Jobber Should Quit Trying to Be Broker, Says This Manufacturer

Editor of Motor World:

May we add just a few words to the letter from "A Manufacturer" in your issue of May 11, in reply to the letter from "A Jobber" in your issue of April 6?

We are manufacturers of automotive equipment of fifteen years' standing and we are familiar enough with the policies of our brother manufacturers, including our keenest competitors, to join with "A Manufacturer" in a vigorous protest against "the usual procedure" as outlined in friend jobber's letter.

It surely is a misstatement of facts to cite as a rule an exception so apparent. We cannot believe that any fair minded jobber will attempt to maintain, as claimed by "A Jobber," that most articles of automotive equipment are backed by large advertising appropriations where the financing is insufficient and that there is usually a realization on the part of the manufacturer that the item is not needed and was impractical. If "A Jobber" meant to imply that it is the trade in general and not the manufacturer who possesses this realization, he should have sufficient recourse through his purchasing agent—or he should get a new one.

If the jobber does not call a halt and bring himself up short, he is going to find himself up against it. He has got to cease endeavoring to act as a broker and get back onto a real jobbing footing.

Our business is solely through the jobber. During the first ten years of our existence we employed two road men and they were able to cover the United States satisfactorily. Now we have ten men and are putting on more. Why? Because we are unable to get satisfactory representation through the jobbers.

At the mid-convention meeting of the Automotive Equipment Association last month, the manufacturers discussed just this situation and it was brought out that practically all manufacturers are to-day forced to employ so-called missionary men who in reality perform the functions of the jobber salesmen, although the manufacturers are still—in part at least—crediting the jobbers with the sales made by these missionary men. One manufacturer stated that he had over 100 such missionary men; another who was new in business and was just applying for membership in the association had 15.

Why perform the jobber's work for him and then pay him for the privilege of doing so?

We do not believe that any jobber will

kid himself into believing that other manufacturers and the tire manufacturers would not eliminate the jobber if they see that more money can be made by doing so. It will not be a very difficult change for the manufacturer who already has 100 men experienced in selling to the dealer—or even the manufacturer with 15 such men.

We say, "Better wake up, Mr. Jobber, and co-operate closely, very closely, with the stable manufacturers of standard automotive equipment."—Another Manufacturer.

Challenges Manufacturer's Statements

To the Editor of Motor World:

In your issue of May 11th is an article from a manufacturer, on the subject of the jobber. We have been reading with much interest, and even more amusement, the various phases of this controversy.

We have no desire to prolong it further, but at the same time we do believe that there are a few misstatements—or shall we call them "misapprehensions"?—shown in his letter which should be corrected.

In the first place, we admit many of the abuses on the part of the jobber which this gentleman says exist, due in the accessory business largely to the fact that it is a new business, that many of the manufacturers engaged in it are new business men, not familiar with the regular processes of distribution. As a result, taking the manufacturing fraternity as a whole, their main desire has been more and more jobbers.

The point is that the people who do these things that he complains of are not jobbers and would not be considered such by any one, yet they are sold by a vast majority of the accessory manufacturers. Whenever these manufacturers learn that it is to their interest to work with real honest-to-goodness jobbers, and that a little salesroom with a big "Wholesale Only" sign over it, and three or four salesmen, does not make a jobber—they will be relieved of many of the difficulties which they have brought upon themselves.

That point, however, is merely a side issue, but the thing which induces us to reply to his letter is his reference to hardware jobbers, and his misstatement of the number of hardware manufacturers who distribute their products direct to the dealer. We are also hardware jobbers. The percentage of hardware manufacturers who have or are successfully distributing direct to the dealer is so small as to be almost negligible. When he implies that unless the

accessory jobber establishes himself while the industry is young, he will be eliminated as the hardware jobber has been, his statement should be challenged.

The real answer is that when the accessory manufacturers learn to know a real jobber when they see one, as well as the hardware manufacturers do, we will then all be much better off.—Jobber.

What a Jobber Thinks of the Summer Merchandising Number

Editor Motor World: Attached is copy of a bulletin which we issued to our salesmen upon receipt of the April 27th Motor World. This will give you an idea of how we call their attention to what to read and what to pass out to the trade. As they go around among the trade they slip this out and hand it to a fellow and ask him, "Have you read so and so?"

We consider the April 27th issue the greatest and best issue ever put out by your good concern.—G. Norman Baughman Co., Tampa, Florida.

To Our Salesmen:

The April 27th issue of Motor World is, to our idea, the best number ever issued, and I want to especially call to your attention the following articles:

Read first cover page—"Just Smile."

Read pages 26, 27, 28, 29, 34 and 35. They are fine.

Read Accessory Letters 1, 2, 3, 4, page 41.

Read Storage Battery Letters 1, 2, 3, page 42.

Note window display layouts, pages 46 and 47, and Show Rooms 48, 49, 50 and 51.

Read and digest the sign on page 53 and then—TELL THE WORLD.

Note the needs of well-equipped shops, page 54, and efficient layout 55.

Details of Shop, Stock Room, Cards, Forms, etc., page 56-7-8-9.

Most garages need badly the dope on pages 60, 61, 62, 63.

On pages 68, 69, 70 read how to help dealers succeed and to sell them.

Page 72—A clever idea of Holmes Simons. Pass it on.

Call your car dealers' attention to Lewis Miller, page 74, and the other good sales ideas.

Every customer we have who sells cars will gain something from these articles. Go over them with him. Show him we are here for Service as well as to sell automotive equipment.

After you have read and studied them carefully—and some of them will merit deep deliberation—then take your copy and call attention to these various subjects as outlined, and if the dealer is a subscriber see if he has read his copy. If not explain how full of information it is. If he is not a subscriber, sign him up right now. Every subscription means a better customer.

Yours for 100 per cent subscription list in your territory.—G. Norman Baughman Co.

A Department of

BETTER MECHANICS

Conducted by J. HOWARD PILE

No. 200

When asking for information, please state whether you maintain a permanent file of Motor World, as many inquiries are answered by reference to previous issues

How to Install a Flat-Rate System in Your Shop

Practical Instructions for Preparing Records, Making Up Estimate Sheets and Starting the System Going—List of Operations Which Can Be Applied to Any Make Car or Truck

By HENRY M. HOLT

Service Manager, Willys-Overland, Inc., New York Branch

THE flat-rate system, used in connection with automobile repairs, has come to stay and it is safe to say that when the principle of this system becomes better known, it will be adopted by all those who do repairing on automotive vehicles, from the largest service station down to the one-man repair shop. Why? Because

- 1—It can be easily adopted.
- 2—It requires very little extra time.
- 3—It requires few added forms.
- 4—It will save money for the customer.

Instead of having to pay a price for repairs resulting from conditions existing in the shop and other departments, something which is of no interest to him, he has, when the flat-rate is adopted, to pay only one standard price for certain operations. This price is arrived at after each repair operation has been done several times under fair conditions, with the best possible equipment, combined with the effort of each employee to do the operations in the least possible time.

It will make repair accounting easy, for instead of having to make up a lengthy explanatory invoice, it will read "as per estimate." If it does nothing else, it will certainly reduce complaints to a minimum, for when there is a clear understanding for the charges which are to be on parts and labor, before the repair job is done, there should be very little reason for misunderstanding after the job is finished, and this elimination of complaints is one of the biggest points in favor of the adoption of such system.

After the flat-rate system has been in operation for some time, the me-

chanics become familiar with the time allowance for each operation, which tends to create a kind of friendly rivalry among them, so that they will be continually trying to make the next job a little better and to have it done in a little less time than the previous job. Such spirit cannot help but increase the efficiency of the mechanic himself.

When a system possesses so many qualifications as just mentioned, the most important question arises: How can it be installed in my shop?

Such accomplishment is not very hard. The only thing necessary is to become thoroughly familiar with the vehicles that are to be included in the flat-rate system, and to make up a few forms so that proper records can be kept. It sounds very simple, and so it is.

The requirements may be called "working principles," and these will be explained in the order they enter into the operation of the flat-rate system.

Sell Your Employees on the Flat-Rate System

First, it becomes necessary to sell the shop superintendent and the department heads, or in a smaller garage, the head mechanic, and later on the mechanics themselves, on the idea that a flat-rate system is going to be established for the two-fold purpose of benefiting the customers and the organization as well, and that it is expected of each employee to do every job in the best possible way and in the least possible time. By doing so, the organization will soon gain the confidence of their customers, which

must result in more business and, in consequence, steady and better employment for all employees.

The next move is to:

1. Determine the Units on Which Repairs Are to Be Done

The best way to accomplish this is to either go over the Parts Book or make a list from the cars or models which are to be included in the flat-rate system. The units given in the list below make a fairly complete list which can either be deducted from or added to as found necessary.

Ammeter	Muffler
Axle (front)	Oil gage
Axle (rear)	Propeller-shaft
Battery	Pump (tire)
Body (and paint)	Radiator
Brakes	Radius rod
Bumper	Runningboard
Carbureter	Spark plugs
Chains (driving)	Speedometer
Clutch	Springs
Coil	Sprockets (driving)
Differential	Starter
Distributor	Steering gear
Fan	Switch
Frame	Tires
Gasoline tank and lines	Top and side curtains
Generator	Transmission
Governor	Torsion tube
Hood	Universal joint
Horn	Vacuum tank
Lamps	Water pump
Magneto	Wheels
Motor	Wiring

2. Standard Expressions for All Repair Operations

After the units on which repairs are to be done have been decided upon, it becomes necessary to determine what repair operations on these units are to be included in the flat-rate system. In making out such list care should be taken to use expressions which are best fitted for the work. Under no condition should expressions like "Drop crankcase," "Tear down engine" be used, as they are certainly misleading to the customer. These standard expressions should be used by the testor, order taker, estimator and the shop. It is absolutely necessary that they familiarize themselves with them, as the success of the flat-rate system depends very much upon what is meant by these expressions.

It is not advisable, in the beginning at least, to make this list too elaborate. It is suggested that the list of operations found below is sufficient for anyone who desires to install a flat-rate system. It can afterward be enlarged, if found necessary.

AMMETER

Install ammeter.

AXLE (FRONT)

Install front axle assembly.
Overhaul front axle assembly.
Straighten and line up front axle assembly.
Install front axle (I-beam only).
Straighten front axle (I-beam only).
Install steering knuckle arm.
Straighten steering knuckle arm.
Install front axle tie rod bolts and bushings.
Install front axle tie rod assembly.
Straighten tie rod assembly.
Install tie rod yoke.

AXLE (REAR)

Install rear axle assembly
Install rear axle center assembly.
Install rear axle housing.
Straighten rear axle housing.
Install rear axle tube.
Install rear axle brake support.
Straighten rear axle brake support.
Install rear axle shaft (right or left).
Straighten rear axle shaft (right or left).
Install rear axle tube grease retainer washers.

BATTERY

Install new battery.
Open up battery for report.
Overhaul battery.
Install new separators.
Install new cell or cells.
Install new cell cover.
Install positive or negative plates.
Burn on battery terminals.
Reseal battery.
Condition new battery.
Recharge battery.
Install battery cables.
Clean battery cables and terminals.
Tighten battery hold-down clamps.
Install battery cradle.
Install battery box.

BODY AND PAINT

Install new body.
Tighten body bolts.
Hammer out dents—smooth down surface and repaint (location of damage).
Install new cowl.
Take dents from cowl and repaint.
Install new instrument board.
Repair instrument board.
Install new door (location).
Repair door (refinish).
Install new fenders (location).

Flat Rates

THIS article, written by Henry M. Holt, is the beginning of a series of practical flat-rate articles that will appear about every three or four weeks in Motor World. This article tells very clearly just how to get going on flat rates. Following this will be actual flat rate sheets covering a number of cars and trucks, giving the detailed operations and the estimated time on these operations. The first detail sheet will appear in August.

Take dents out of fenders (location) and refinish.
Repair fender beading (location).
Install new hood.
Repair hood.
Install hood catch.
Reupholster and recover body.
Reupholster and recover (certain parts of body).
Repair upholstery (location).
Clean and redress upholstery.
Repair mouldings.
Install door glass (location).
Repair window lifter.
Install new door lock (or handle).
Install windshield assembly.
Install windshield glass.
Repair windshield frame.
Straighten windshield stanchion (right or left).
Repaint car—first-class, burn-off job.
Recolor and varnish.
Rub down and refinish.

BRAKES

Install external brake band assembly (location).
Install internal shoe (location).
Reline both sets of brakes.
Reline internal brakes.
Reline external brakes.
Wash off and adjust brakes.
Equalize and adjust both sets of brakes.
Equalize and adjust external brakes.
Equalize and adjust internal brakes.
Free up brake cross rods.
Install brake pull-back springs.
Lengthen or shorten brake pedal.
Repair hand brake lever ratchet.

BUMPER

Attach bumper.
Straighten bumper.
Line up bumper.

CARBURETER.

Install new carbureter assembly.
Overhaul carbureter assembly.
Drain, clean and adjust carbureter.
Install choker assembly.
Repair choker assembly.
Stop leak in carbureter.
Stop leak in carbureter line (location).
Install new float.

CHAINS (DRIVING)

Attach new driving chains.
Tighten driving chains.
Oil and grease driving chains.

CLUTCH

Install clutch assembly.
Install clutch cone assembly.
Reline clutch cone.
Install new clutch discs.
Install clutch thrust bearing.
Install clutch thrust rollers and pins.
Install clutch throw-out yoke.
Install clutch spacer shaft.
Adjust clutch to stop grabbing.
Adjust clutch to stop slipping.
Lengthen or shorten clutch pedal.
Install clutch pull-back spring.
Install clutch brake.
Adjust clutch brake.

COIL

Install new coil.
Test out coil and report.
Fasten coil in bracket.
Attach coil wire.

DIFFERENTIAL

Install new differential assembly.
Overhaul differential assembly.
Disassemble differential for report.
Install master ring and pinion gears.
Install master ring gear (or worm gear).
Install pinion gear (or worm).
Adjust differential.
Install differential bearing (right or left).
Clean out differential, put in fresh lubricant.

DISTRIBUTOR

Install distributor assembly.
Overhaul distributor assembly.
Install distributor breaker plate assembly.
Clean and adjust breaker points.
Install distributor drive gear.
Install distributor arm.
Install distributor cover.
Install distributor wires to spark plugs.

FAN

Install fan assembly.
Overhaul fan assembly.
Install fan bearing.
Attach fan belt.
Straighten fan blades.

FRAME

Install frame assembly.
Remove body for report on frame.
Straighten goose-neck (location).
Straighten front cross-member.
Straighten side channel (location).
Straighten rear cross-member.

GAS TANK

Install gas tank assembly.

Repair Order and Invoice R. A. No. 000
Ref. No.

Blank Service Station

Name JOHN DOE Date 4-7-21 Mileage 11550
Time 10:30 A.M. Date of Sale JUNE 17-1918

Address 16 REMSEN ST; BKLYN, N.Y. Model 90 B T Customer's Order No.
Telephone No. MAIN 6800 License No. P 105 Car No. 199930 TERMS NET CASH

INSTRUCTIONS

MOTOR OVERHAUL MOTOR EST PLUS MATERIAL
MISC - INSTALL SPINDLE BOLTS & BUSHINGS, ALSO CROSS EST
ROD BOLTS & BUSHINGS EST
ADJUST FRONT WHEEL BEARINGS EST
RELINE CLUTCH INSTALL NEW CLUTCH BUSHING EST
INSTALL CLUTCH ROLLERS AND PINS EST
INSTALL UNIVERSAL JOINT & BOOT ASSEMBLY EST
RELINE FOOT BRAKES THERMOID EST
FREE UP & LUBRICATE ALL BRAKE SHAFTS, RODS AND CLEVIS' EST
ADJUST EMERGENCY BRAKES EST
ELEC - OVERHAUL GENERATOR EST PLUS MATERIAL
INSTALL STARTING MOTOR DRIVE END BEARING EST
REAR END - REMOVE COVER OF TRANSMISSION & REPORT CAUSE OF 2ND SPEED JUMPING OUT - LOOK FOR LOOSE FORK OR WORN 2ND SPEED GEARS EST PLUS REPORT

NOTE: GLASS LIGHTS - HORN - OIL - OK

We will only do work as shown unless written instructions are given for ADDITIONAL WORK. Storage will be charged 24 hours after application to customer that work has been completed.

Owner's Car is left for repairs or other purposes subject to the OWNER'S risk of fire.

Signature JOHN DOE

Additional Order R. A. No. 000
Ref. No.

Name JOHN DOE Date 4-7-21 Mileage
Time 7:30 P.M. Date of Sale
Address Model 90 B T Customer's Order No.
Telephone No. License No. Car No. TERMS NET CASH

INSTRUCTIONS

IT IS NECESSARY TO INSTALL 2ND & HIGH SLIDE GEAR & COUNTERSHAFT ASSEMBLY INCLUDING BEARINGS & SPACER

CHARGE

PARTS \$30.38
LABOR 15.00
\$45.38 PLUS TAX

OK PHONE TO MR. LANG

Signature HJ LANG

Shop Request for Additional Order

Name John Doe R. A. 9000 Model 90BT Date 4/7/21

It is necessary to install 2nd & high slide gear & countershaft assembly including bearings & spacer.

Parts 30.38
Labor 15.00
\$45.38 plus tax

Off phone to Lang HJ Lang

TIME TICKET

Job No. 000 Workman's Name Nelson
Customer John Doe Clock No. 260

DESCRIPTION OF WORK

Installed universal joint, clutch rollers & pins, relined clutch & bushing

177 Out
60 In
7:45

Signature Foreman's O.K.

TIME STUDY REPORT

JOB NO.	DATE	OPERATOR	REMARKS	TIME USED
2442	4-7-21	Nelson	Relined clutch cone	20
2443	4-7-21	Nelson	Overhaul axle assembly	2
2444	4-7-21	Nelson	Relined rear axle shaft	13 1/4
2445	4-7-21	Nelson	Relined universal joints	18
2446	4-7-21	Nelson	Installed new axle	4
2447	4-7-21	Nelson	Installed differential	1 1/2
2448	4-7-21	Nelson	Installed hook up plate	1
2449	4-7-21	Nelson	Straightened right side	7 1/2
2450	4-7-21	Nelson	Removed carbon from valves	15 1/4
2451	4-7-21	Nelson	Overhaul spark plug	4
2452	4-7-21	Nelson	Installed muffler assembly	2
2453	4-7-21	Nelson	Overhaul timing gear	37
2454	4-7-21	Nelson	Installed second speed sliding gear	40
2455	4-7-21	Nelson		7
2456	4-7-21	Nelson		8

Shop Instructions

INSTALL TIMING GEAR

Remove hood, radiator, fan belt and pulley. Remove timing gear case, timing gears. Install new timing gears and fit properly. Retain valve mechanism (set magnets shop gear on 55 and 56) Reset ignition. Try gears for quietness. Attach timing gear case, fan pulley and fan belt. Install radiator, change hose if necessary, fill radiator with fresh water; test car.

REMARKS: 70, 104, 1013, 1012, 1011, 1010, 1009, 1008, 1007, 1006, 1005, 1004, 1003, 1002, 1001, 1000, 999, 998, 997, 996, 995, 994, 993, 992, 991, 990, 989, 988, 987, 986, 985, 984, 983, 982, 981, 980, 979, 978, 977, 976, 975, 974, 973, 972, 971, 970, 969, 968, 967, 966, 965, 964, 963, 962, 961, 960, 959, 958, 957, 956, 955, 954, 953, 952, 951, 950, 949, 948, 947, 946, 945, 944, 943, 942, 941, 940, 939, 938, 937, 936, 935, 934, 933, 932, 931, 930, 929, 928, 927, 926, 925, 924, 923, 922, 921, 920, 919, 918, 917, 916, 915, 914, 913, 912, 911, 910, 909, 908, 907, 906, 905, 904, 903, 902, 901, 900, 899, 898, 897, 896, 895, 894, 893, 892, 891, 890, 889, 888, 887, 886, 885, 884, 883, 882, 881, 880, 879, 878, 877, 876, 875, 874, 873, 872, 871, 870, 869, 868, 867, 866, 865, 864, 863, 862, 861, 860, 859, 858, 857, 856, 855, 854, 853, 852, 851, 850, 849, 848, 847, 846, 845, 844, 843, 842, 841, 840, 839, 838, 837, 836, 835, 834, 833, 832, 831, 830, 829, 828, 827, 826, 825, 824, 823, 822, 821, 820, 819, 818, 817, 816, 815, 814, 813, 812, 811, 810, 809, 808, 807, 806, 805, 804, 803, 802, 801, 800, 799, 798, 797, 796, 795, 794, 793, 792, 791, 790, 789, 788, 787, 786, 785, 784, 783, 782, 781, 780, 779, 778, 777, 776, 775, 774, 773, 772, 771, 770, 769, 768, 767, 766, 765, 764, 763, 762, 761, 760, 759, 758, 757, 756, 755, 754, 753, 752, 751, 750, 749, 748, 747, 746, 745, 744, 743, 742, 741, 740, 739, 738, 737, 736, 735, 734, 733, 732, 731, 730, 729, 728, 727, 726, 725, 724, 723, 722, 721, 720, 719, 718, 717, 716, 715, 714, 713, 712, 711, 710, 709, 708, 707, 706, 705, 704, 703, 702, 701, 700, 699, 698, 697, 696, 695, 694, 693, 692, 691, 690, 689, 688, 687, 686, 685, 684, 683, 682, 681, 680, 679, 678, 677, 676, 675, 674, 673, 672, 671, 670, 669, 668, 667, 666, 665, 664, 663, 662, 661, 660, 659, 658, 657, 656, 655, 654, 653, 652, 651, 650, 649, 648, 647, 646, 645, 644, 643, 642, 641, 640, 639, 638, 637, 636, 635, 634, 633, 632, 631, 630, 629, 628, 627, 626, 625, 624, 623, 622, 621, 620, 619, 618, 617, 616, 615, 614, 613, 612, 611, 610, 609, 608, 607, 606, 605, 604, 603, 602, 601, 600, 599, 598, 597, 596, 595, 594, 593, 592, 591, 590, 589, 588, 587, 586, 585, 584, 583, 582, 581, 580, 579, 578, 577, 576, 575, 574, 573, 572, 571, 570, 569, 568, 567, 566, 565, 564, 563, 562, 561, 560, 559, 558, 557, 556, 555, 554, 553, 552, 551, 550, 549, 548, 547, 546, 545, 544, 543, 542, 541, 540, 539, 538, 537, 536, 535, 534, 533, 532, 531, 530, 529, 528, 527, 526, 525, 524, 523, 522, 521, 520, 519, 518, 517, 516, 515, 514, 513, 512, 511, 510, 509, 508, 507, 506, 505, 504, 503, 502, 501, 500, 499, 498, 497, 496, 495, 494, 493, 492, 491, 490, 489, 488, 487, 486, 485, 484, 483, 482, 481, 480, 479, 478, 477, 476, 475, 474, 473, 472, 471, 470, 469, 468, 467, 466, 465, 464, 463, 462, 461, 460, 459, 458, 457, 456, 455, 454, 453, 452, 451, 450, 449, 448, 447, 446, 445, 444, 443, 442, 441, 440, 439, 438, 437, 436, 435, 434, 433, 432, 431, 430, 429, 428, 427, 426, 425, 424, 423, 422, 421, 420, 419, 418, 417, 416, 415, 414, 413, 412, 411, 410, 409, 408, 407, 406, 405, 404, 403, 402, 401, 400, 399, 398, 397, 396, 395, 394, 393, 392, 391, 390, 389, 388, 387, 386, 385, 384, 383, 382, 381, 380, 379, 378, 377, 376, 375, 374, 373, 372, 371, 370, 369, 368, 367, 366, 365, 364, 363, 362, 361, 360, 359, 358, 357, 356, 355, 354, 353, 352, 351, 350, 349, 348, 347, 346, 345, 344, 343, 342, 341, 340, 339, 338, 337, 336, 335, 334, 333, 332, 331, 330, 329, 328, 327, 326, 325, 324, 323, 322, 321, 320, 319, 318, 317, 316, 315, 314, 313, 312, 311, 310, 309, 308, 307, 306, 305, 304, 303, 302, 301, 300, 299, 298, 297, 296, 295, 294, 293, 292, 291, 290, 289, 288, 287, 286, 285, 284, 283, 282, 281, 280, 279, 278, 277, 276, 275, 274, 273, 272, 271, 270, 269, 268, 267, 266, 265, 264, 263, 262, 261, 260, 259, 258, 257, 256, 255, 254, 253, 252, 251, 250, 249, 248, 247, 246, 245, 244, 243, 242, 241, 240, 239, 238, 237, 236, 235, 234, 233, 232, 231, 230, 229, 228, 227, 226, 225, 224, 223, 222, 221, 220, 219, 218, 217, 216, 215, 214, 213, 212, 211, 210, 209, 208, 207, 206, 205, 204, 203, 202, 201, 200, 199, 198, 197, 196, 195, 194, 193, 192, 191, 190, 189, 188, 187, 186, 185, 184, 183, 182, 181, 180, 179, 178, 177, 176, 175, 174, 173, 172, 171, 170, 169, 168, 167, 166, 165, 164, 163, 162, 161, 160, 159, 158, 157, 156, 155, 154, 153, 152, 151, 150, 149, 148, 147, 146, 145, 144, 143, 142, 141, 140, 139, 138, 137, 136, 135, 134, 133, 132, 131, 130, 129, 128, 127, 126, 125, 124, 123, 122, 121, 120, 119, 118, 117, 116, 115, 114, 113, 112, 111, 110, 109, 108, 107, 106, 105, 104, 103, 102, 101, 100, 99, 98, 97, 96, 95, 94, 93, 92, 91, 90, 89, 88, 87, 86, 85, 84, 83, 82, 81, 80, 79, 78, 77, 76, 75, 74, 73, 72, 71, 70, 69, 68, 67, 66, 65, 64, 63, 62, 61, 60, 59, 58, 57, 56, 55, 54, 53, 52, 51, 50, 49, 48, 47, 46, 45, 44, 43, 42, 41, 40, 39, 38, 37, 36, 35, 34, 33, 32, 31, 30, 29, 28, 27, 26, 25, 24, 23, 22, 21, 20, 19, 18, 17, 16, 15, 14, 13, 12, 11, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1

Fig. 1

Fig. 2

Fig. 3

Fig. 4

Fig. 5

Fig. 6

Fig. 7

Fig. 1—Repair order and estimate. There are at least five copies made out going to (1) customer; (2) Repair-shop foreman; (3) Accounting department; (4) Service Department files; (5) Job card on heavy cardboard. Additional copies may be made on plain paper to go to foreman or straw bosses? Fig. 2—Reverse side of Repair order. This appears on all copies except the shop card. Fig. 3—Shop request for additional order. Made out by foreman. Fig. 4—Additional Repair order. Made out to conform to shop request shown in Fig. 3. This is made out in five copies just as in the case of the original repair order. The shop card is pink, to easily distinguish it from the original order, which is in cream color. There is nothing on the reverse side of any copy. Fig. 5—Workmen's time ticket. For checking accuracy of estimates and on which revisions are based. Fig. 6—Detailed shop instructions covering each and every operation. In loose leaf form 5½ by 8½ punch to fit pocket note book. Fig. 7—Time study report of all estimated jobs showing actual time used. These are compared with estimates and variations noted.

Solder gas tank to stop leak.
Install gas tank gage.
Repair gas tank gage.
Install gas line from tank to (location).
Repair gas line from tank to (location).

GENERATOR

Install new generator assembly.
Overhaul generator.
Install generator armature.
Install generator brushes.

GOVERNOR

Attach new governor.
Overhaul governor.
Set governor for proper speed.

HOOD

Attach new hood.
Line up hood to fit radiator.
Straighten hood.

HORN

Install new horn.
Install new armature.
Install new diaphragm.
Install new horn spring.
Install new horn bracket.
Install new horn wires.
Adjust horn.

LAMPS

Install front lamp (location).
Install side lamp (location).
Install instrument lamp assembly.
Install tail lamp assembly.
Install lamp bracket (location).
Install lamp socket (location).
Install lamp reflector (location).
Install lamp glass (location).
Install lamp bulb (location).

MAGNETO

Install new magneto.
Overhaul magneto.
Clean and adjust magneto.
Install magneto coupling.
Install new breaker points.
Reset magneto timing.

ENGINE

Install engine assembly.
Disassemble engine for report.
Overhaul engine.
Regrind cylinder to fit new pistons, rings, piston pins and bushings.
Install crankshaft.
Refit main and connecting rod bearings.
Refit main bearings only.
Refit main connecting rod bearings only.
Install camshaft bushings (location).
Install timing gears (location).
Install timing gears case.
Install timing gears case gaskets.
Install piston rings (location).
Install piston pins or bushing (location).
Install new cylinder block.
Remove carbon and grind valves.
Remove carbon only.
Adjust valve tappets.
Attach new cylinder head.
Attach new cylinder head gasket.
Tighten down cylinder head.
Attach new flywheel.

Fig. 8 ESTIMATED JOBS BELLED

JOB NO.	NAME	ESTIMATE	BILLING	LOSS	GAIN
4117	A. C. Harrison	215.00	215.00	15.00	
4118	J. F. Black	47.12	46.50	0.62	
4119	H. Smith	1.50	2.00		0.50
7121	G. J. Thompson	14.50	15.00		0.50
4120	R. D. Reid	175.25	18.00		4.75
4121	W. B. Richardson	18.74	18.00		0.74
4122	J. M. Gearing	9.50	8.25		1.25
7123	A. D. Thompson	20.25	20.00		0.25
4124	F. F. Richardson	215.61	210.61		5.00
4125	A. J. Franklin	25.40	24.10		1.30
4126	M. J. Brown	6.70	6.90		0.20
1931	C. A. Smith	14.67	12.75		1.92
2002	C. E. Brown	9.00	8.75		0.25
1412	J. J. Smith	116.65	110.80		5.85

Fig 9

A-16 (FORM) - LOSS ONLY

FORM A-16

	FORM 4	FORM 10	FORM 12	FORM 14				
OPERATION	LOSS	NET	FORM 12	FORM 14				
Install front axle assembly	8	4.00	8.00	8	7.50	8	7.50	
Overhaul front axle assembly	8	7.50	8	8.00	13	15.00	13	15.00
Straighten and line up axle assembly	8	8.00	8	7.75	7	15.00	7	15.00
Install front axle (1 ton only)	8	8.00	8	8.00	8	8.00	8	8.00
Straighten	1-1/2	2.75	2	2.00	2	2.00	2	2.00
Install steering knuckle	1-1/2	2.75	2	2.00	2	2.00	2	2.00
Straighten	2	3.00	3	3.00	3-1/2	3.75	3	3.75
Install steering knuckle bolt & nut	2	4.00	4-1/2	5.75	4	6.00	4	6.00
Straighten	1	1.00	1	1.00	1-1/2	1.50	1	1.50
Straighten	1-1/2	2.25	2	2.00	2	2.00	2	2.00
Install tie rod ends & bushings	2-1/2	3.75	3	3.00	4	3.00	4	3.00
Straighten	2-1/2	3.75	3	3.00	1-1/2	1.50	1-1/2	1.50
Install tie rod ends assembly	1-3/4	2.25	2	2.00	2	2.00	2	2.00
Install tie rod ends	1	1.00	1	1.00	1-1/2	1.50	1-1/2	1.50

Fig. 8—Daily record of estimated jobs showing the estimate price, the billing amount and whether there is a loss or a gain in each job. Fig. 9—How the operations are classified for the convenience of the estimator.

Attach new crankcase gasket.
Clean out oiling system.
Drain crankcase, refill with fresh oil.
Install exhaust manifold.
Install exhaust manifold gasket at motor.
Install intake manifold.
Install intake manifold gaskets.
Attach valve cover gaskets.
Weld motor support arm (location).
Tighten engine bolts.
Line up engine.
Install valve guide bushings.
Install valve push rods.
Install valve springs.

KNIGHT ENGINE

Install new sleeves (location).
Refit sleeve rod.
Refit eccentric shaft bushings.
Install new eccentric shaft.
Install new eccentric chain.
Install junk rings (location).

MUFFLER

Install muffler assembly.
Disassemble muffler, clean out and assemble.
Install muffler pipe from engine.
Install muffler tail pipe.
Repack joint at exhaust manifold.
Install new muffler bracket.

OIL GAGE

Install oil gage.
Tighten oil gage connections.

PROPELLER SHAFT

Install propeller shaft.
Straighten propeller shaft.
Install propeller shaft bearing.
Install propeller shaft yoke.
Lengthen or shorten propeller shaft.

PUMP (TIRE)

Install tire pump assembly.
Install tire pump plunger leathers.
Install tire pump gear.
Free up sized tire pump.
Put proper amount of oil in pump.
Tighten pump connections.

RADIATOR

Install radiator assembly.
Install radiator core.

Repair radiator core to stop leak.
Straighten radiator core.
Install radiator shell.
Straighten radiator shell.
Install radiator hose (location).
Line up radiator.
Install radiator stayrod.
Tighten radiator to frame.
Flush out radiator.
Repaint radiator.

RADIUS ROD

Attach new radius rod.
Equalize both radius rods.

RUNNINGBOARD

Install runningboard assembly (location).
Install runningboard dust shield.
Install runningboard moulding.
Straighten runningboard bracket.
Attach runningboard linoleum.

SPARK PLUGS

Install new spark plugs (location).
Clean and adjust spark plugs.
Install spark plug wires.

SPEEDOMETER

Install speedometer assembly.
Repair speedometer head.
Install speedometer cable.
Repair speedometer chain.
Install speedometer pinion.
Install speedometer driving worm.
Install speedometer driving worm gear.

SPRINGS

Install spring assembly (location).
Reset springs (location).
Install new spring leaves (location).
Install spring bolts and bushings (location).
Install spring shackles (location).
Install spring hanger (location).
Install spring clips (location).
Tighten spring clips (location).
Graphite springs.

SPROCKETS

Attach new sprockets.
Reverse sprockets.

STARTING MOTOR

Install starting motor assembly.
Overhaul starting motor assembly.
Install Bendix drive assembly.

Install bendix drive spring.
 Install bendix drive pinion.
 Install starter chain.
 Tighten starter chain.
 Install starting motor brushes.
 Install starting motor armature.
 Turn down starting motor armature commutator.
 Line up starting motor.
 Install starter switch.
 Repair starter switch.
 Install starter cables.

STEERING GEAR

Install steering gear assembly.
 Overhaul steering gear assembly.
 Reduce play from steering gear and connecting rod by adjustment.
 Install steering eccentric bushing.
 Install steering worm.
 Install steering worm gear.
 Install steering worm nut.
 Install steering arm.
 Remove play from steering arm.
 Install steering wheel assembly.
 Remove play from steering wheel.
 Remove play from steering arm connecting rod.

SWITCH

Install switch assembly with wires.
 Install switch block.
 Solder wires in back of switch.
 Repair switch so cut-out button will not jump out.

TIRES

Attach new tire.
 Repair shoe.
 Repair tube.
 Inflate tire to the proper pressure.

TOP AND SIDE CURTAINS

Install top with side curtains.
 Install top only.
 Install and fit side curtains.
 Recover top (location).
 Install top bow.
 Install new lights in curtains (location).
 Reinforce curtains and install curtain fasteners.
 Redress top and curtains.

TRANSMISSION

Install transmission assembly.
 Disassemble transmission for report.
 Overhaul transmission assembly.
 Install transmission case.
 Install transmission sliding gears (location).
 Install transmission main drive shaft.
 Install countershaft gears (location).
 Install reverse idler gear.
 Install shifting fork.

TORSION TUBE

Install torsion tube assembly.
 Straighten torsion tube assembly.
 Install torsion tube yoke.
 Install torsion tube collar.
 Install radius rods.
 Fill universal with grease.

UNIVERSAL JOINT

Install universal joint assembly.
 Overhaul universal joint assembly.
 Install universal joint yoke (location).

Install universal leather boots.
 Install universal discs.
 Install universal discs bolts.
 Install universal cover.

VACUUM TANK

Install vacuum tank assembly.
 Install vacuum tank float.
 Install vacuum tank inner.
 Clean out vacuum tank.
 Tighten vacuum tank connections.

WATER PUMP

Install water pump assembly.
 Install water pump pedal.
 Install water pump shaft.
 Install water pump coupling.
 Install water pump gland nut.
 Install water pump packing.
 Tighten water pump connection.
 Line up water pump.

WHEELS

Install wheel assembly (location).
 Install wheel hub (location).
 Install wheel spokes (location).
 Install wheel felloe rim (location).
 Install wheel bearings (location).
 Adjust wheel bearings (location).
 Line up front wheels (location).
 Repaint wheels (location).

WIRING

Install wire harnesses.
 Install wiring junction box (location).
 Install front light wires.
 Install side light wires.
 Install tail light wires.
 Install spark plug wires.

MISCELLANEOUS

Refill and turn down grease cups.
 Oil and grease car thoroughly.
 Wash and polish car.

After the list of operations is made, the biggest part of the job is over, and the next thing to do is to find out how long it takes to do the work. There are two ways of finding this out.

First, by going back over repair jobs which have been done and determining from the time tickets how long it should take to do the work requested by each operation. If the time record of these jobs has been properly kept, it will be of great assistance, but if not, it is far better to start by dissecting each job from the time the flat-rate system is installed.

Repair Order

To do this it will be necessary to have, as every well regulated service station and repair shop should have, a repair order form, on which the request for repairs is stated and properly authorized. This order should be written by the tester, or service salesman, in accordance with the owner's request, and the diagnosis made; but right now standard expressions must be put in use. We cannot lay too much stress upon the fact that the same wording must be used at all times for the same operation. This should be easy to understand, as it would not do to operate an estimating system if an order came through for

"take up on connecting rods," and the next time it came through for "fitting connecting rods," when the order-writer meant the same thing. Therefore, it is essential to use the standard expressions at all times, for the customer will be charged accordingly.

If it is not possible from outside examination to determine exactly what repairs should be done to the unit, the order should read, "disassemble and report," unless the owner has given instructions to go ahead with whatever repairs are found necessary; then, of course, this will not be necessary.

Additional Order

After the unit in question has been disassembled, the shop foreman should make up a list showing what repairs are needed. The owner should be notified and if authorized to go ahead, an additional order should be made up, copy of which should be sent to the shop. Additional orders are in some cases absolutely necessary, but great care should be taken to mention, if possible, all the additional work on the first order, as owners do not like to be called up frequently to O. K. an additional order, as each one of them means additional expense.

Time Tickets

Every automotive repair establishment should keep some kind of a record of the time expended on the work done in the shop, and it is absolutely necessary to have such record when a flat-rate system is being installed. It may seem like a lot of work to make out a time ticket for each operation, but it is not.

The description on the time ticket should correspond exactly with the work done in connection with the operation mentioned on the job order, so there can be no confusion later on when the job is dissected.

After the job has been completed and the work order closed out, the dissection of the first job order should immediately start.

Time Study Report

A time study report should be made up for the purpose of finding out how much labor is expended on each operation. A simple form should be drawn up with columns showing job number, unit, operation, model, and time expended. As this form is only to be used for marking down information which is to be used later on, it does not have to be elaborately made up. For that matter, one ruled with pencil and written in long hand will do equally as well—the main thing is the information. Care should be taken to fill this in correctly, especially in connection with the labor.

Every time ticket should be gone over carefully before it is put down on the report. Such report can also be used to advantage after the flat-rate system has been installed. For example: If a job comes along which is of an unusual nature, the operation in question should be noted down by the estimator or the

man in charge of quoting prices, and when the job is finished the unfilled space under "time expended" will act as a reminder, and by going over the time tickets it can easily be found out how long it took to do the job.

Record of Flat-Rate Charges to Customers

After an operation has been done about three or four times, one can strike an average, and the number of hours used should be multiplied by the hourly rate. This will then become the set charge for that operation. These figures should be marked down either on a card or in a book of the loose-leaf type. Both the cards and the leaves of the book can be ruled in a manner as shown by the accompanying forms. In all cases the various models to which the flat-rate system has been applied must be shown. A loose-leaf binder is found to be very suitable for that purpose, as one sheet will hold the information necessary for all operations on one unit.

You will notice that on the right hand upper corner the unit is written. This is done so that the estimator will not have to go over each leaf separately, but instead, he can finger through the corners only in order to find the unit desired. By doing this, a great deal of time will be saved.

Making the Estimate

After enough information has been compiled to warrant starting the flat-rate system, no time should be wasted in doing so. There may be a feeling of timidity when it comes to approaching a customer with something new, but in that case it would be well to remember that timidity is only a nice word for lack of "push." The main thing is to get started, and the sooner the better.

It is surprising to know how much of this information can be compiled in one month, and it should not take longer than that before the flat-rate system can be put into operation. Then, when an order is written, the estimator should mark alongside of each operation, on the copy which remains in the service department, the flat-rate charge. These figures should then be added and the estimate should be given to the customer in a lump sum.

Those operations, which for some reason or other cannot be estimated—for instance, such jobs which are sent out—these should be marked "material and labor," and the meaning of it should be explained to the customer.

As previously explained, the operations which cannot be determined from outside examination, should be marked "report," and a price should be charged for disassembling the unit, and when report has been completed the customer should be notified as to the additional charge.

It has been found that when operating a flat-rate system it is the best plan to estimate for labor only. Should the owner insist upon a final figure for the completed job, he should be told that this can be done only after the units

in question have been disassembled and the cost of the parts determined. However, from experience it can be said that it will not take long to find out the approximate number of parts used for certain repairs, especially when it comes to overhauling a unit, and very little trouble should be experienced by quoting the customer a flat-rate for labor plus parts.

If a customer should request to have an estimate sent to him for approval, a standard form for this can be made up, but it has been found that an estimate written on a letter-head carries with it a little more of that personal touch which is so essential in keeping the good-will of the customer.

A stamped post card can be made up and sent out with the estimate; this card having the necessary information printed on it so all the customer has to do is to sign the card and drop it in the letter box. If a customer is known by the service department his O. K. over the telephone should be taken as an authorization to go ahead with the work. It is not always advisable to insist upon a written confirmation.

Profit and Loss Report

We have now come to the point where our flat-rate system will have to stand the acid test. The estimated job has been completed and billed; the billing clerk can then easily find out the difference between the hours spent on the job and the amount charged to the customer—the difference in money will show either a profit or a loss. A sample form showing this difference should be made up and at the end of each day presented to the service manager; a copy should also be sent to the estimator.

It is needless to mention that this should, of course, be watched very carefully and any large difference should immediately be investigated. If it becomes necessary, a change should be made in the flat-rate price.

There is not a great deal more to say. The principles which I have mentioned are, of course, general, and different methods may be worked out, depending upon the conditions existing in the service station or repair shop. The main object has been to show that it is not so difficult to install this system, as a great many people think.

Detailed Description of Operations

In conclusion, it may be well worth mentioning that it has been found to be of great value to have a book made up, preferably of the loose-leaf type, giving a detailed description of each operation.

Very often a customer will remark that the charge seems to be very high for a certain amount of work. It would, of course, be easy enough for the estimator to explain what is to be done in order to finish such operation, but if the customer can be shown this procedure on a typewritten sheet, it will appear to him more authentic. It will also facili-

tate matters should a new estimator have to be engaged, as he can familiarize himself with these operations by carefully studying these detailed descriptions.

Another plan that has proven very satisfactory is to post in each department a table showing the maximum time allowance for the operations which generally are done by that department. Each man will then show that under no condition will any more time be allowed, with probably the exception of something happening which could not be controlled.

To get the best benefit out of the flat-rate system, it is my firm belief that the repair shop should be departmentized, even if it consists of only a few mechanics. Every human being seems to have an aptness for doing some things better than others, and there is no reason why this aptness should not be put to good advantage. It is, therefore, reasonable to believe that no efficient shop foreman would put a man to do work on the rear end when he should be working on motors.

Special tools, speed wrenches, and such equipment which will facilitate the work on a car should be procured by the service department, for a great deal more time can be saved by using this kind of equipment than in any other way.

It has been said that the flat-rate system is not fair to the customer who has kept his car in good condition, inasmuch as it will take less time to work on this car than it would on one which has not received any too good attention.

It does not take very much longer time to overhaul an engine or any other unit, whether it has been taken care of or not, as when it comes to replacement of parts there will be found very little difference in the time expended.

The flat-rate system is not a theory or a fad, but a fact, founded upon the same common sense that has enabled the shoemaker and the tailor for years to use a flat-rate system in his own business; and as we know they will gladly give you at any time an estimate for the work they may be asked to do, so why should not we, the representatives of one of the largest industries of the world, do equally as well.

For those who do not believe that the flat-rate system will be of benefit to them and their customers, I can only say one thing—give it a fair trial and you will never go back to the old system of time and material.

Book Review

Questions and Answers Relating to Modern Automobile Construction, Driving and Repair. By Victor W. Page. Norman W. Henley Publishing Co., 2-6 West Forty-fifth Street, New York City. Price \$2.50.

This is the new 1921 edition revised and enlarged. The new edition has 701 pages, 387 illustrations and plates, and is in cloth binding. There are thirty-nine lessons covering over 2000 questions and answers on the automobile, its construction, operation and repair.

THE LAW

By GEORGE F. KAISER

Perplexed?

Does some point of law perplex you?
Why don't you ask MOTOR WORLD's legal editor to discuss the question?

Need Not Pay Until Truck Is Delivered Complete

That the buyer of a truck under a conditional bill of sale, who takes possession of part of the truck is not obliged to pay, until he either receives the entire truck or the seller asks to be allowed to attach the undelivered part, is the decision in the case of *Parker vs. Funk*, 197 Pacific page 83.

The court held that the fact that the conditional sale contract acknowledged receipt of the truck, was not binding on the buyer when at the time of making the contract no part of the truck was actually delivered.

In its opinion the court summed up the facts as follows:

"One Moon was engaged in the business of making automobile trucks by taking the front part of a Ford automobile with its engine and attaching it to what is known as an Ameston truck unit.

"The buyer was an automobile salesman and desired to purchase a truck for demonstration purposes. Moon had in his place of business or garage the front part that was necessary to make a truck, but without the Ameston unit attached. Under these circumstances Moon and the buyer entered into a contract of conditional sale whereby the buyer agreed to purchase 'One Ameston truck unit and Ford automobile, motor No. 1757717 — body — with complete equipment. Serial No. —,' for the price of \$900, of which he paid \$300 down and agreed to pay the balance in monthly installments of \$50 each.

"The Ford automobile motor designated by the number quoted was the one owned by Moon, so that it was specified as part of the subject of the sale. Whether there was any truck unit that was to be agreed upon as the remaining part does not appear.

"Although the Ford part and the truck unit had not been attached and it was evidently intended that they should be before the subject matter of the sale was complete, and although there was no actual delivery of anything to the buyer, the contract contains an acknowledgment by him of the receipt of the 'said property,' which is described as quoted and that it was in good condition and repair. The contract also contains the usual provision as to title remaining in the vendor until the purchase price shall be fully paid, and that in the event of the failure of the buyer to pay any installment as it became due the vendor should have the right to retake possession without demand.

"The buyer secured possession of the Ford automobile part but was never able to secure possession of the remainder of the truck. As he wanted a complete truck or the return of the purchase price he paid, he was justified in holding the part and refusing to make the payments until the remainder of the truck was tendered to him."

Can Owner Collect Insurance on Confiscated Car?

Editor Motor World: Can you please give us some information on the following subject which is of great interest to all the trade at this time? If motor cars are confiscated by village, town, city or Federal authorities because they are carrying prohibited liquors is there any way that the owners of these cars can recover their value from insurance companies?—Subscriber, New York.

Answer.—I guess there are a lot of people who wish there was! Wouldn't it be fine if you could carry "hootch" around in your car without a prescription and without danger of having the car confiscated? As you are a dealer, however, I suppose what you really want to know is not how you can carry "personal hootch" around, but what you can do if a man who buys a car from you under a conditional bill of sale is caught carrying the forbidden thing and has his car in which you still have an interest, confiscated.

I understand that a domestic insurance company here in New York cannot indemnify the owner of an automobile from confiscation of his car for breaking the law, but that certain of the casualty companies may guarantee the performance of a contract entered into between a dealer and a buyer under a conditional bill of sale. I do not however know of any such policies which have actually been issued.

Colorado Rules on Warranty

The Supreme Court of Colorado, in the case of *Schneider vs. Green*, decided that when suit is brought for damages for breach of warranty of a motor, the jury should be instructed by the trial judge, that, if they find from a fair preponderance of the evidence that the seller warranted the motor and agreed to take it back and refund the price, upon failure of the warranty they should find for the buyer for the amount he paid, but if they found no such warranty and promise, they should find for the seller. 197 Pacific Reporter page 240.

Garage in Residential Section May Be Nuisance

The Court of Civil Appeals of Texas recently held that while a public garage is not of itself a nuisance, it may become such by being established and operated in a strictly residential section. *Lewis vs. Berney*, 230 S. W. page 246.

That the construction and operation of the garage in a section of the city in which such business has never been carried on, where it would increase fire rates, impair the value of property and injure the health of the residents, and render the property undesirable for residential purposes, was also held in this case.

The court in reaching this decision said, "A plant of the character sought to be constructed and erected is not a nuisance per se. If lawfully operated in a neighborhood given over to similar businesses or to any other industrial concerns it would not in any event perhaps constitute a nuisance. A livery stable in its day was a lawful business and did not constitute a nuisance per se. But when established and operated in a strictly residential district it became a nuisance and upon complaint of the residents courts did not hesitate to restrain the owners from operating them. As an institution the livery stable has disappeared. It has been superseded by the automobile garage, as the horse has been superseded by the motor-propelled vehicle. The objections once made to the livery stable are not in detail like the objections to the garage. But they are just as reasonable and forceful."

This Dealer Not Responsible

In a recent California case a bicyclist sued a corporation which sold automobiles for injuries claimed to have been sustained by reason of the negligence of one of its employees, while demonstrating a car, the court decided in the dealer's favor.

The bicyclist had been struck by an automobile which had been left with the company by its owner so that it might be sold. At the time of the accident it actually was being driven by an employee of the dealer corporation but the court finding that the accident occurred after business hours after the dealer's place of business had been closed for the day, and that the driver was operating it on his own account under an arrangement he had with the owner, found the dealer free from liability. *Patton vs. Woodward Co.* 197 Pacific Rep. page 368.

Repairshop Shortcuts

No. 2985—Inserting Brake Lining Rivets on Stutz.—A tool made of 5/16-in. steel, shaped on one end like the rivet, obviates the difficulty of driving the rivets straight in a Stutz lining, as there is a web reinforcement which makes it difficult to get at.—H. Ralcey Miller, Auto Inn Garage, Eustis, Fla.

No. 2986—Shop Body Hoist.—A hoist for removing and replacing bodies is made, as shown in the illustration, and operated by a chain fall hooked to the overhead beam. The hoisting arrangement can be changed to suit the particular shop conditions.—Robert D. Peebles, Blue Ribbon Garage, Inc., Bridgeport, Conn.

No. 2987—Emergency Replacement of Woodruff Key.—When a Woodruff key is lost from a magneto shaft or other point and another is not available, one can be made by cutting a section from a heavy lock washer, fitting the piece to the slot with a file.—M. A. Medina, Automobile Supply Dealer, Merida, Yucatan, Mexico.

No. 2988—Diameter Gage for Lathe.—A gage made from a plate $\frac{1}{4}$ or $\frac{1}{2}$ in. thick is kept on the tailstock and is useful for setting the tool to approximately the correct cut. Finish cuts should, of course, be made according to caliper measurements.—S. E. Gibbs, Corydon, Iowa.

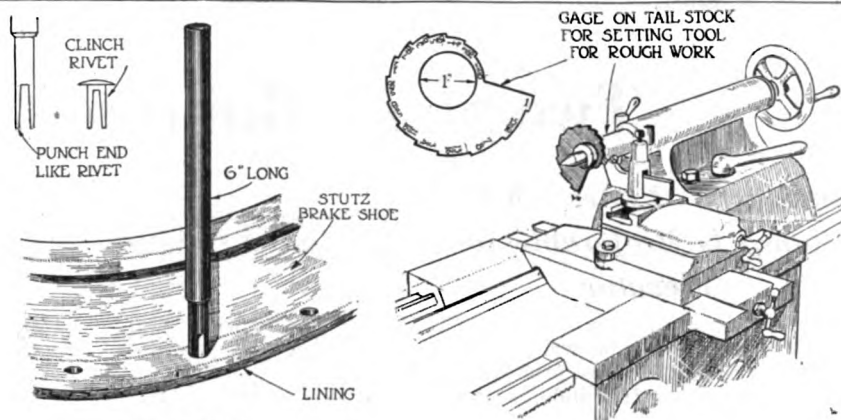
No. 2989—Socket Wrench for Ford Carburetor Flange Bolt.—A handle made of 7/16-in. drill rod is welded or riveted to the socket so that it can be used in removing and replacing the Ford carburetor flange bolt.—Leo Natestine, Swaney Motor Co., Fort Dodge, Iowa.

No. 2990—Cart for Oil and Grease Pans.—A low cart is made to carry oil and grease pans so that they can be placed and removed from under cars without crawling underneath.—F. A. Pearson, Willys-Overland, Inc., New York City.

No. 2991—Fitting Piston Rings.—Rings fitted on the edge as well as at the joint will give much better compression and can be tested with a plate of glass and Prussian blue.—Scott S. Bond, Hattiesburg, Miss.

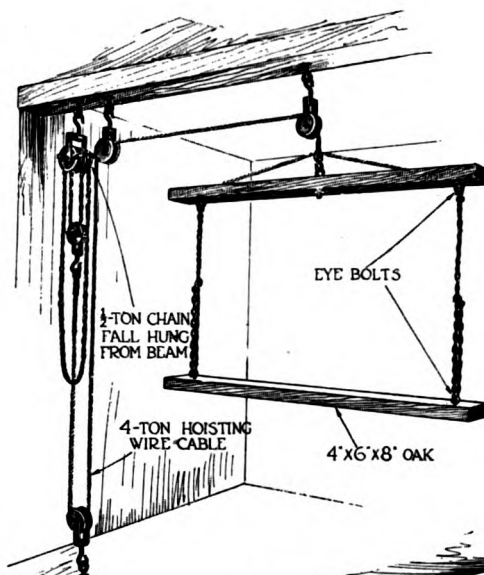
MAKE A DOLLAR

SEND in a sketch and a description of the device you doped out to make your work easier. Motor World will pay a dollar for every idea accepted for publication.

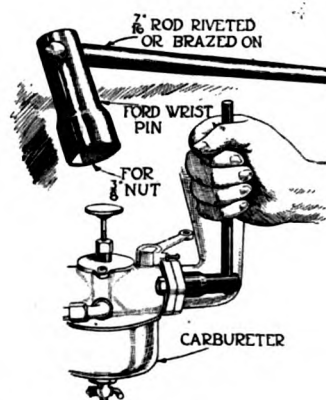


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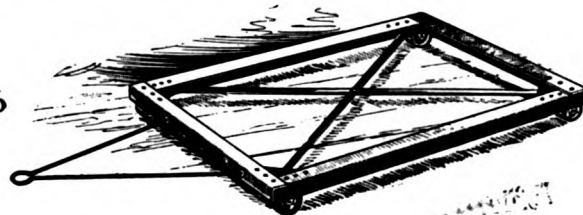
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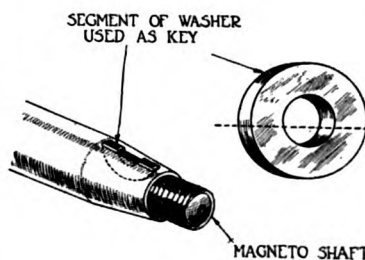
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No. 2987



No. 2991

SCIENTIFIC CONSTRUCTION

GARAGES

SHOWROOMS

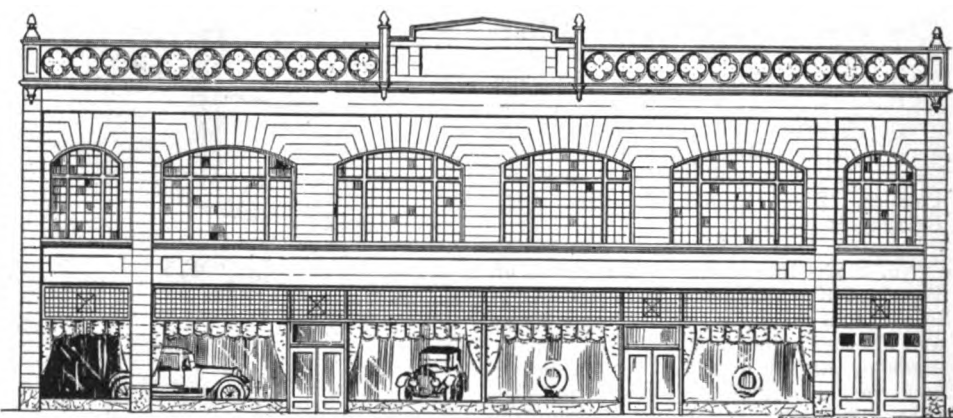
REPAIRSHOPS

Conducted by DONALD D. BLANCHARD

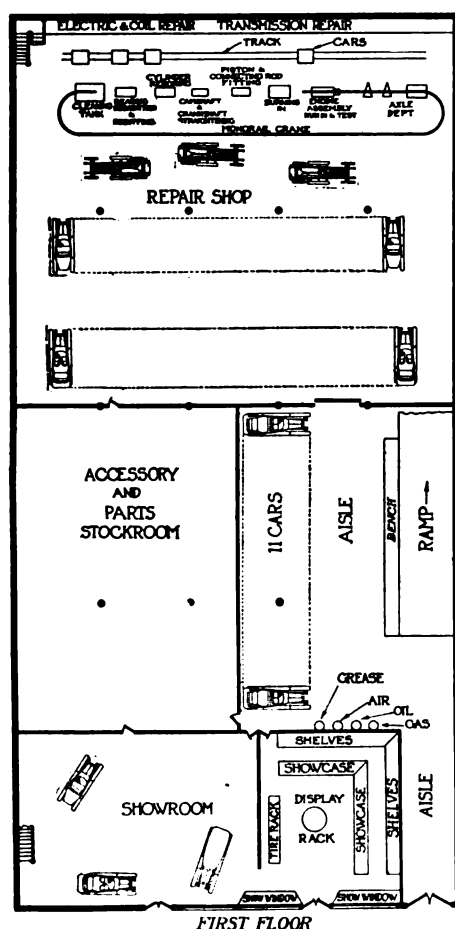
Two-Story Building with Ramp

Conditions Under Which Ramp Is Preferable to Elevator

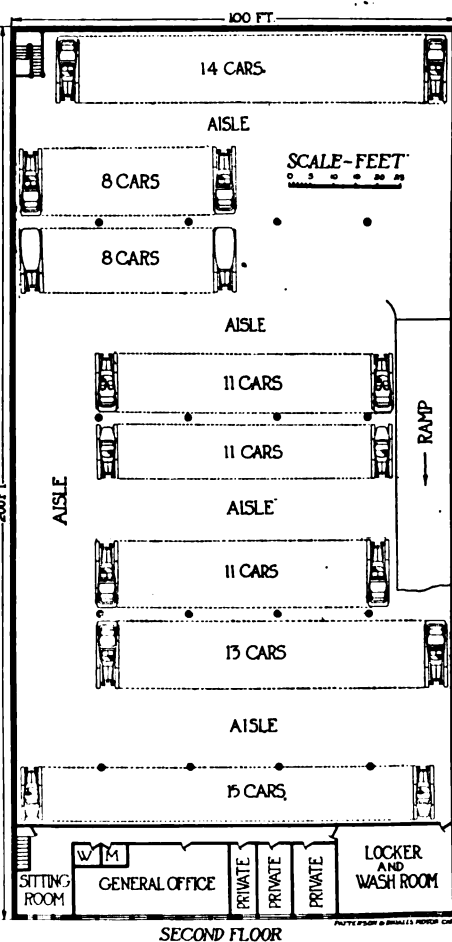
MOST readers, who write this department for plans, prefer ramps to elevators in buildings of two or more stories. A ramp has the advantage that there is no direct expense connected with it and, furthermore, it makes the building more accessible. An elevator requires an operator, consumes power and is not as convenient as a ramp. However, despite its obvious disadvantages, the elevator is often the preferable construction. The ramp takes



The large plate glass windows offer a splendid opportunity for display



FIRST FLOOR



SECOND FLOOR

This two-story building is designed for the use of a Ford dealer

up considerable space and often would interfere seriously with the economical layout of the building. Furthermore, it is usually difficult to provide sufficient turning radius at the top of the ramp to enable a car to get off of it easily. In order to secure the necessary turning space, it is frequently necessary to sacrifice space that could be used for storage if elevators were installed.

A ramp is used in the building illustrated on this page. It does not interfere with the first-floor layout in any way, but on the second floor conditions are not as satisfactory. Columns interfere with cars leaving the ramp. Furthermore, a rather heavy percentage of aisle space is required in order to make all cars accessible to the ramp. However, in this particular case it is believed that the advantages of the ramp have sufficient weight to justify its installation.

The showroom and accessory store are located on the first story at the front. Cars to be displayed will enter the showroom through the double front doors. The accessory and parts stockroom has been made unusually large because this dealer expects this department to do a big business. The space between the ramp and the stockroom may be used for quick service or for storage.

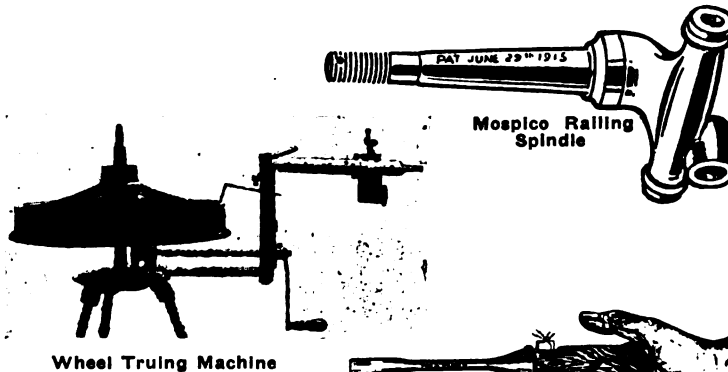
The tool equipment in the service station is laid out on the plans of a factory production line. The arrangement is such that the various operations are performed with a minimum of handling and wherever possible simultaneously.

(Continued on page 38)

Automotive Equipment

WHEEL TRUING MACHINE

The purpose of this machine is to face off the web of a wood wheel, after the hub flanges have been removed, to run true with the felloe. The facing tool and holder slide on a bar, and is fed automatically by turning the crank. The stand is also adapted to use on wire wheels. The spindle is changed and the wheel held in position by means of cones. An indicator is provided to point out high and low spots, after which the wheel is lined up by adjusting the spokes.—G. F. Kight, Norfolk, Va.

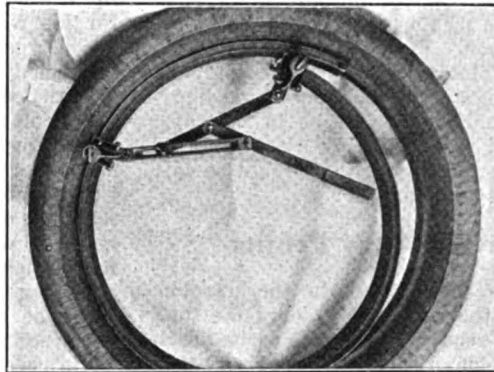


Wheel Truing Machine

Mospico Railing Spindle

WONDER TIRE RIM TOOL

This tool can be used with all types of cross-cut demountable rims. It has a special patented single operation locknut feature which makes it possible for one man to remove the tire. It contracts and expands the rim in one operation. It has a folding handle, so that it can be carried in the tool box. Price, \$6.—Wonder Products Co., South Norwalk, Conn.



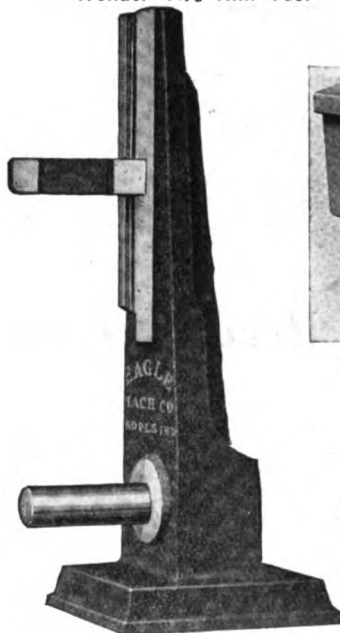
Wonder Tire Rim Tool

INSWELL MOTOR TOWING CHAINS

These chains are made from high grade steel, welded and heat treated to insure uniform strength. They are packed singly in substantial canvas bags suitable for shipment by parcel post or for carrying in car or truck. The chain for passenger cars has 4000 pounds strength, for light trucks 9000 pounds and for heavy trucks 12,000 pounds. Passenger car chains are made in lengths of from 14 to 20 ft., light truck chains from 18 to 24 ft. and the heavy truck chains from 20 to 26 ft.—Columbus McKinnon Chain Co., Columbus, Ohio.

EAGLE UNIVERSAL ALIGNING FIXTURE

With this tool a mechanic can align a connecting rod alone or assembled with the piston. It has a small vise for use in straightening the rod. The tool comes complete with three accurate bushings, which are of special design. These bushings make it possible to take all size bearings from 1½ to 2½ in. in diameter. The arbor of the fixture is for Ford bearings.—Eagle Machine Co., Indianapolis, Ind.



Eagle Universal Aligning Fixture

MOSPICO RAILING SPINDLE

A replacement front wheel spindle for Ford cars. It is

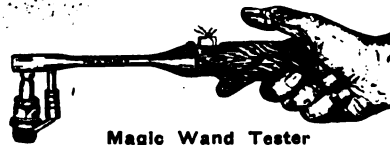


Heller Battery Repair Kit

curved so that the front wheels are in effect just behind the center of the axle. In this way a castor action is obtained. Price \$9.75 per pair—Motor Spindle Corp., 128 East Jefferson Street, Detroit, Mich.

MAGIC WAND TESTERS

A special tool for testing spark plugs. It is provided with two contacts which are insulated from each other and connected to the terminals of the spark gap located on the handle. One of these prods is placed on the spark plug terminal and the other on the shell. Price \$2.50.—Magic Mfg. Co., Chicago, Ill.



Magic Wand Tester

SUPREME SOLDERING KIT

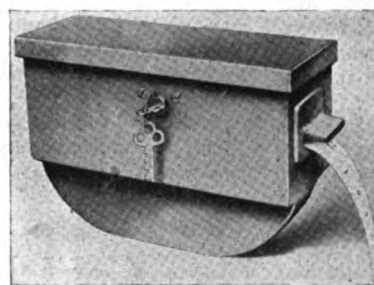
The complete outfit consists of 1 alcohol blow torch, 1 bar Supreme Brand aluminum solder, 1 coil Kester Self Fluxing Wire solder, 2 patches of sheet tin, and 2 patches of sheet aluminum. Each kit is packed in a box and 12 boxes are contained in a display carton. Price \$1.50 each or \$18. per carton.—Brown Supply Co., 51 Chardon Street, Boston, Mass.



Supreme Soldering Kit

NATIONAL LIQUID GAS RECORDER.

This recording device is attached to the gasoline pump and provides a graphic record of all sales and deliveries of gasoline. Every gallon pumped is recorded on a tape which comes out of the machine automatically as the pump is operated. In the case of a charge customer, the customer is expected to sign the tape. This device is also used on oil tanks. The apparatus is contained in a small box 7 in. long, 2½ in. wide and 6 in. high and is secured to the pump support by three small studs. Price \$35. to \$40.—National Liquid Recording Corp., 74 Cortland Street, New York City.



National Liquid Gas Recorder

HELLER BATTERY REPAIR KIT

The following tools are included in this outfit: A battery nipper, with a leverage of 20 to 1, which is used for cutting off lead parts; a battery knife specially designed to get into corners; a battery rasp and float cut file; standard 8-in. battery pliers and a ball pein hammer. The complete kit sells for \$8.50.—Heller Bros. Co., Newark, N. J.

SYSTEM IN BUSINESS

This Department Is Intended to Assist Motor World Readers in Working Out Their System Problems — It Will Answer Questions Concerning System and Accounting

Business on a Mud Pie Basis

There's a Note of Warning in This Story of a Garageman Who Doesn't Know What His Customers Owe—He Needs SYSTEM

"**H**OW much do I owe you?" The other day we asked our garageman this question and he couldn't answer it. At one time or another he had done a number of small jobs for us and we were desirous of cleaning up the accumulated costs. In fact, he had to ask us what work he had done.

We enumerated the following jobs:

Vulcanizing inner tube,
Mounting tube and casing on rim,
Adjusting breaker points.

This agreed with his memory, so he started out to compute our bill. First he walked to the other end of the shop to interview Bill, who had vulcanized the tube. Fortunately Bill remembered the job, or said he did, so the garageman was able to get his idea of what the job was worth.

The chap who mounted the tube and casing on the rim had to be located next. He furnished his estimate of what his work was worth, so two items on the bill were settled.

The third charge for adjusting the breaker points was not so easy. The mechanic who did this job had been sent to a nearby city for some parts, so he couldn't be interviewed. The garageman had to guess at this charge. He had no way of knowing whether new points had been installed, the old ones cleaned and filed, or a simple adjustment of the opening had been made. If the mechanic's memory was good and he had been in the shop, he might have been able to tell fairly accurately what this job was worth.

Charges Were Reasonable, But—

From our viewpoint, the charges seemed reasonable so we accepted the bill. But the owner's viewpoint of what a job should cost is very likely to be quite different from what it actually cost the garage to do the work. Usually the difference is in favor of the owner.

If the charges had seemed to be un-

fair to us, it would have been impossible for this man to prove the fairness of his bill because he had nothing other than the fallible memories of his employees to depend upon. Furthermore, suppose we had had him give the car a complete overhauling and he had gone about figuring the charges on the job in the same haphazard manner. How close could he have come to a figure that would be fair both to us and himself?

Giving Away Profits

Then we drove out to the gasoline pump on the curb and ordered the tank filled. It required $6\frac{1}{2}$ gallons to fill it. The garageman said, "Oh, we'll call that six gallons." If he sells gasoline on a three-cent margin, his gross profit on that sale was eighteen cents. By knocking off the charge for the extra one-third gallon, he lost about half of his profit. Instead of the indicated gross profit of eighteen cents, he really made about ten cents.

While the gasoline tank was being filled, we had his boy fill a grease cup underneath the car. It was a mean,

awkward and dirty job and took some minutes of time, but there was no charge for it other than a dime we gave the boy for his work.

This garageman needs system. He does good work and has a large clientèle of satisfied customers. But he is making it difficult for himself to be successful by neglecting to keep records. The charges he makes for his services are not based on an accurate knowledge of what his direct and overhead expenses are, but instead on what he thinks he ought to get for the job. He has no defense in case a customer thinks he is overcharged because he has nothing on which to base the proof of the justice of his bills.

He needs a system of accounting that will tell him about the profitableness of his business. He needs a repair order form and methods of keeping time and material costs. With accurate records he wouldn't have to guess how much a job was worth, nor would he have to canvass the mechanics in the shop when he had to render a bill. System would provide this information and it would be accurate information that he could depend upon—not guess work.

Cost Records Help Sell Service

THE importance of having accurate service cost records is clearly illustrated by the experience of a Philadelphia truck dealer. This dealer maintains a service station that has a splendid reputation in his territory, and it is seldom that his customers question his bills. When there is a complaint, however, he has the records to back up his charges for the work.

Recently he did \$200 worth of work on a truck. The owner made a kick on the size of the charge and issued an ultimatum that he would not pay more than \$50. The dealer got out his records and went around to see him. He got a warm welcome from the truck owner. The lat-

ter repeated his offer of settlement and said that it was final.

The dealer told him that he had come to settle the bill to his satisfaction. But first he wanted to go over it with him item by item and explain the reasonableness of the charges. So they sat down together while the dealer explained why it cost so much to replace this part and why the labor on that adjustment was so heavy.

When he finished, the owner wrote him a check for \$185.

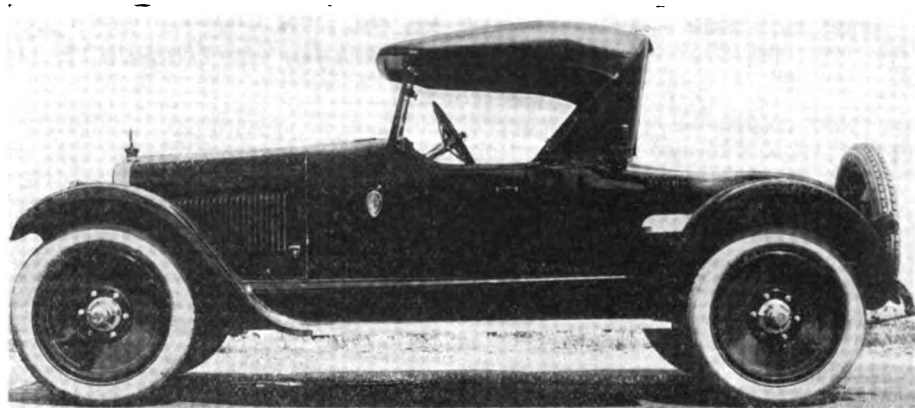
The good-will of this customer was retained because this dealer was a salesman and because he had the records to back up his salesmanship.

Wills Sainte Clair Roadster Ready, \$3,275 —Enclosed Job Soon to Appear

ALTHOUGH the Wills Sainte Clair car has been out four months, so far only the touring body has been in production. The roadster body is now going through, the price being \$3,275. Coupe and sedan bodies are under construction and will shortly appear on the market. The chassis is identical with that of touring car and was described in *Motor World*, March 16, 1921, page 28.

The roadster seats four passengers comfortably. Two can be seated in the front seat and two more in a rumble seat. The latter is of novel design. When not in use it is covered by a hatchway folding flush with the rear deck. This hatchway is in two sections connected by a hinge and folds back to form the rear of the seat. The section against which the passenger rests is thickly upholstered in leather.

The seat is designed to provide abundant leg room for a tall man. This room is secured by extending the compartment under the front seat. The rear compartment is also available for baggage. The standard colors provided are Lady Mary maroon, Newport blue and Liberty green. Other colors and color combinations may be secured upon order at an advance in



The Wills Sainte Clair roadster, \$3,275

price. The radiator, hub caps and side or courtesy light are nickel plated on the roadster. Like the touring car, the roadster is equipped with disk wheels painted to correspond with the body. A spare wheel and tire carried on a rack at the rear are furnished. A top of special design fully equipped with curtains comes with the car.

type with three speeds forward and one reverse and is built in a unit with the engine. The gearshift lever and brake lever are at the center to the driver's right, and the clutch is of the multiple dry disk type, completely inclosed in the bell housing.

Final drive is by internal gear, the axle being a Torbensen. Brakes operate on the rear wheels, the service set being of the contracting type and the emergency set of the expanding type. High gear ratio is 6.3 to 1. Tires are 32 x 4½ in. cord, truck type, pneumatic, with non-skid treads. The weight of the entire vehicle, complete with body equipment, is 3100 lb., gasoline tank capacity 14 gal., chassis lubrication with high pressure grease system, wheelbase, 124 in., tread, 56 in.

Republic Brings Out ¾-Ton Rapid Transit Model 75

The Republic Motor Truck Co., Inc., Alma, Mich., is now in production on the new model 75, the Republic Rapid Transit. This new model has a ¾-ton rating and sells for \$1395 complete with canopy top, pneumatic cord tires and complete equipment.

The engine is a Lycoming, 4 cylinder, cast in block, detachable L head type, with a bore of 3½ in. and stroke of 5 in. The power plant is three point suspended

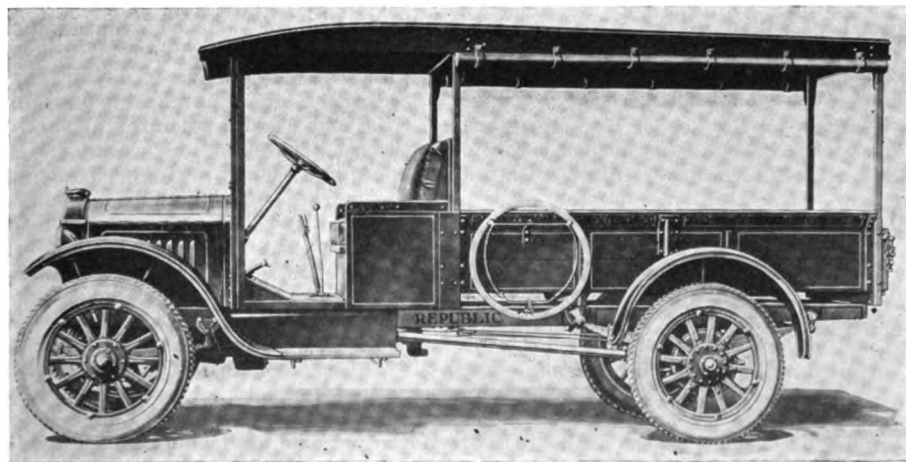
and cooling is by thermo siphon system with a 15 in. fan. Ignition is from a generator and battery system with manual advance. The carburetor is a float automatic type with a throttle operated both by foot accelerator and hand lever on the steering column. The radiator is of the detachable type with tanks, sides and cellular core removable, very much the same as on other Republic models. The gearset is of selective sliding

Trade Literature

Bulletin No. 90-A, Universal Battery Co., Chicago.—This new 32-page book is a complete parts catalog for automobile and farmlight batteries. Prices are listed with each part, and discounts and terms are furnished. Copies of this catalog will be sent free upon request.

Oldsmobile Pacemaker, house organ of the Olds Motor Works, recently issued a California number, filled with appealing pictures of the Golden State, as seen from an Oldsmobile touring car, and telling graphically the story of J. W. Leavitt & Co., the California distributor.

Wrench Manual, Walden-Worcester, Inc., Worcester, Mass. A 136-page book on the use of special wrenches in automotive service. In order to explain the use of the various wrenches, the book gives the detailed disassembly and re-assembly of the Ford car and truck, and the Fordson tractor. Each step is illustrated with a photograph showing the type of wrench used, and the method of use.



Republic ¾-ton Rapid Transit Model 75

FAIR TRADE PRACTICES

Automotive Equipment Association Adopts a Code of 31 Regulations to Be Self-enforced by Manufacturers and Jobbers for the Good of Business.

AS a basis for improvement of conditions in the automotive equipment business, the Automotive Equipment Association adopted a code of fair trade practices at its recent convention at Mackinac Island. The code was unanimously adopted, the adoption carrying with it an implied recommendation that all members, manufacturers and jobbers, abide by its provisions. The code follows:

1—One of the prime objects of this association is to promote harmonious and friendly relations between its members, and insofar as is possible, to encourage reciprocity and dealing with or patronizing the members and thereby help those who are doing their part in maintaining the organization and operating on the policy of "Those who help me, I help."

2—Where a member maintains one or more branch houses under the same name and ownership as the parent house, said branch or branches may be placed upon the mailing list to receive such data and assistance as emanates from the commissioner's office, but will not otherwise be considered as a member in the sense that said branches, so listed, have a right to vote.

3—We strongly favor and recommend arbitration in the adjustment of all differences between members, and insofar as possible between members and non-members through the properly constituted tribunal of the association rather than recourse to law.

4—We denounce and condemn in the strongest terms any form of piracy or the practice of exact duplication in color, description or design that would tend to deceive the buyer or the public that in purchasing said imitation they were getting the original article, as a manufacturer who through genius, advertising efforts or reputation, has built up a trade on any article so that it has become generally known by its color, design or construction, though it may not be patented, is entitled to the same consideration and reward as though it were in fact patented—and wholesale distributors are expected to support this movement.

5—Sending threatening letters by manufacturers to the jobbing trade on copyright articles or patent controversies is unfair, and in condemning this method of coercion we urge manufacturers to adjudicate their differences in court or through other proper channels rather

than depending upon intimidating influences with the trade or jobbers for the furthering of the interests of the contending party.

6—When called upon to patronize schemes of a temporary or transient nature, or of publications not having a regularly established place of business, a stated circularization or directories not giving the name of the residents in the city or town where published, or purchasing tickets for raffles, balls, picnics, souvenirs, pamphlets or bulletins issued by any trade or association in the interest of any group of individuals, we should refer same to the commissioner.

7—We discountenance and disapprove jobbers making demands on manufacturers for appropriations for advertising in show bulletins or other temporary issues having no regular circulation, and especially in special editions of local newspapers usually published during show time in the city where such publication is issued. We view this as a burden on the manufacturer and of no real value to the jobber.

8—We do not believe members serve their own best interests by soliciting advertisements or donations in the furtherance of house organs or similar forms of advertising, and the same is hereby discountenanced.

9—We do not believe in the encouragement of syndicate or stock catalogs—they tend at times to deceive and lead to misconstruction of the real position of the alleged author; nor do we believe that any manufacturer should make any allowance in merchandise or otherwise for advertising purposes in such catalogs, as that is not, in our judgment, the proper or best method of exploiting goods or merchandise.

10—We discountenance the furnishing of inserts for trade catalogs or the allowance upon the part of the manufacturer to the jobber for illustrating his goods in his (the jobber's) catalog. No objection, however, to the manufacturer furnishing inserts for office or salesmen's catalogs.

11—We strongly disapprove of those publishing a catalog supplying a quantity of same to the retail dealer, with said dealer's name appearing on the outer cover instead of the name of the original author of said catalog, which is the only change from the original, as it leads to confusion, gives false impressions and encourages the dealer to represent himself as a jobber, and has at times secured for such dealers so provided with these catalogs advantages

and privileges that are unfair to other dealers in that community.

12—On printed matter usually furnished by the manufacturer, transportation charges should be paid; it being an expensive form of advertising, the jobber should, in ordering, order only such amounts as he can properly use, and when received, the same should not be permitted to go into disuse.

13—We feel it an injustice for a jobber to accept display fixtures from the manufacturers without keeping them in the use for which they were intended, and strongly disapprove of any other course or use being made of same.

14—We discountenance the use of itinerant commission men in the missionary field, whose work is of a transient nature, usually does not cover the territory the second time and whose sole object and interest is the commission that he will derive from the transaction, and in order to make a showing or accomplish his purpose frequently misrepresents the true conditions to his employer, which has led up to disputes, dissatisfaction, and in many cases, loss and litigation.

15—We strongly discountenance manufacturers offering inducements to the salesman of the jobber either in cash, prizes or gratuities of any kind, as an unwarranted interference with the sales force and the business of the jobber.

16—We disapprove of an unreasonable guarantee, believing it to be detrimental to the trade, especially the practice of a ten or thirty day trial on articles of merchandise offered for sale, as it is an annoyance and expense to the jobber.

17—We believe all car manufacturers should be supplied with all the goods they need for their own consumption or requirements in equipping their cars or products, but believe it unfair and are opposed to their purchasing large quantities not used as an integral part or in the construction of their complete equipment, and then throwing such surplus on the market through their agencies, who in the disposition of same tend to demoralize the market, and in many cases such goods disposed of in this way are sold at prices below the jobber's cost.

18—We recommend when the goods of a member manufacturer are to be offered for sale below the generally accepted or prevailing market value, for the purpose of closing out or liquidating a stock, that the jobber offer these products to the manufacturer or to jobbers in their localities, and the manu-

facturer and jobbers given an opportunity to purchase same.

19—We will not permit the name of a manufacturer or his goods to be used in debating questions on the convention floor, as it is a form of advertising unfair to other manufacturers, and speakers will refrain from drawing parallels or making comparisons by the use of or references to any particular name or make of goods.

20—The practice of buying goods in club or syndicate form for the purpose of distribution or parceling same out to a number in small lots, we believe to be unfair competition alike to the dealer, the jobber and the manufacturer.

21—We do not believe that any garage, repair shop or dealer should be granted any special privileges or better prices by reason of the fact that he is a member of an association or organization.

22—We believe the picking out of certain customers on the part of jobbers and offering them a sliding scale of rebates, payable at the end of the year in proportion to the volume of business secured, is not the best system of merchandising, invites friction and at times involves litigation, if indeed it is not within the scope of unfair competi-

tion. We, therefore, discountenance and disapprove methods of this kind.

23—The nature of this business consisting of many small parts, together with the trend of the times, has brought parcel post and small shipments into very general use, and such orders require prompt attention and preferred service, and to cover the expense of same, a service charge of not less than five cents should be made for each parcel post shipment with a minimum charge for the merchandise of 25 cents plus postage and insurance.

24—Interest on overdue accounts at the rate of not less than 7 per cent should be charged, and where refused or any improper reduction of cash discount is made and payment declined, it will then become a proper matter for and may be deferred to the credit department to handle in the same manner that other delinquent accounts are handled by that department.

25—We oppose the practice of post-dating bills as being economically and commercially unsound.

26—When orders have been correctly filled, no goods should be returned unless an explanation has been made and consent obtained from the original shipper, and when such return is made, if the goods are in salable condition so that

they may be re-stocked and sold as new goods, the same will be credited at not less than 10 per cent for service and rehandling charge, plus the shipping expense.

27—Ordering by telephone and telegraph has come into general use, and we discountenance the encouragement of reversing these charges, which should not be permitted.

28—We believe the proper terms on purchases of automotive equipment shall be 2 per cent for cash ten days and thirty days net.

29—Disregard for terms, which are just as much a part of a contract as the question of price or delivery, at times works a hardship. We recommend a faithful and honorable adherence to same.

30—We recommend the trade acceptance form of settlement.

31—Information on jobbers: Prospective customers should furnish a list of manufacturers they buy from as jobbers, and the manufacturers should verify these references, ascertaining how long they have sold party, greatest amount of credit extended, method of handling account; and all manufacturers are urged to be frank and co-operate with each other in exchanging this information.

CITY REJECTS SCHEME TO MOTORIZE TRANSIT

INDIANAPOLIS, July 18—Tearing up of street railway tracks and substitution of motor buses for street cars, is advocated by G. T. Bryant, sales manager of a local accessories company in a letter to Mayor Jewett just made public. Mayor Jewett replies that the suggestion is not practical and that Indianapolis is growing so rapidly that elevated railroads and methods of rapid transit other than motor vehicles will be necessary to handle the crowds of business people.

"Instead of laying more street car tracks, why not tear up most of the tracks now in the streets and put in a modern system of motor bus transportation?" Bryant asks. "If Indianapolis really wants to put itself on record as being thoroughly up to date, using twentieth century methods, it should give more thought to elimination of nineteenth century street car transportation."

"The plan is thoroughly impractical," says Mayor Jewett. "We cannot do away with \$15,000,000 worth of property like that. No city in America has such an arrangement."

Stephens Wins Economy Run

SACRAMENTO, CAL., July 18—The Stephens Salient Six won the second annual Reliability and Economy Run of the Sacramento Motor Car Dealers' Association, repeating its victory of last year. The Stephens, entered by the W. J. Benson Co., won by .14 of a point over the Packard Single Six entered by Earl C. Anthony, Inc.

The scores were figured by dividing the amount of gasoline used by the pounds weight of the car and its passengers, and deducting a point for each quart of water and each pint of oil used. The Stephens had a score of 298.14 against an even 298 for the Packard. The Stephens, driven as last year by T. F. Doud, thus retains possession of the trophy hung up by the Sacramento Bee, and needs but one more win to secure its permanent possession.

BUICK SERVICE STATION IS OPENED IN ST. LOUIS

ST. LOUIS, July 18—The new maintenance building of the Vesper-Buick Auto Co. has been thrown open to the public by Fred Vesper as his conception of what a fully equipped and up-to-date Buick service station should be like. The cost of the building was upward of \$100,000. General offices and sales rooms of the company will be continued at their present location.

A feature of special interest in the new station is the compressed air washer where a car may be thoroughly washed, both body and chassis, in but a fraction of the time required to do the work by the old method.

Start Car Theft Probe

NEW YORK, July 18—District Attorney Lewis of Kings County will soon start investigating alleged collusion between owners of automobiles insured against theft and the thieves who steal them. The movement has been precipitated by the statement of an alleged thief who said he had taken the car in question under agreement with the owner so that he might collect insurance.

WAREHOUSEMEN WANT UNIT PARTS STATIONS

LAKE OF BAYS, ONT., July 14—The National Furniture Warehousemen's Association, comprising more than 500 household goods and furniture storage-men, the majority of whom operate motor trucks, adopted a resolution at its convention here, addressed to the unit parts manufacturers of the country requesting them to establish service parts stations where distributors and agents could furnish not alone present supplies but parts long considered obsolete.

The resolution set forth that if such stations could be established where both old and current models of parts could be obtained, this would tend to stabilize parts, would prevent price advances, would assure immediate deliveries for customers and would give the maximum efficiency to which those patrons were entitled.

The Pacific Coast Furniture Warehousemen's Association and the California State Draymen's Association have adopted a similar resolution, it was disclosed.

Duesenberg Names Officers

INDIANAPOLIS, July 18—Reorganization of the Duesenberg Automobile & Motor Co., Inc., has been completed by the election of the following officers: President, B. A. Worthington; vice-president and general manager, L. M. Rankin; secretary and treasurer, F. A. Reilly; chief engineer, F. S. Duesenberg; assistant chief engineer, A. S. Duesenberg; assistant engineer, E. J. Porter; sales manager, Harry W. Anderson; purchasing agent, George H. Beilstein.

Business Shows Continued Strength

JULY NOT SUBNORMAL IN NEW YORK BUYING

Vacations Figure in Usual Slowup in Business for Metropolitan District

NEW YORK, July 18—Passenger car sales which ran high throughout June in the metropolitan territory have dropped considerably during July up to date and the majority of dealers expect the falling off for the month to be more or less comparative with that which prevailed in normal years before the war.

Oldsmobile, Scripps-Booth and one or two other cars which had price reductions late in June after the novelty of most of the competing reductions had worn off sold better during the first two weeks in July than in previous months. However, the normal run of cars including the strongest sellers have showed considerable dropping off in day by day sales.

The indications are that the July sales record will be considerably below June, but nothing subnormal as July goes in New York City, with a great many people in the automobile owning class out of town on vacations.

Some notable sales records were made during June. Dodge sold at retail within the limits of New York City more than 400 passenger cars and 100 trucks. It is said that this has not been equalled except in cases where distributors included sales in outlying territories in their New York reports.

Nothing has developed to indicate that there will be any severe curtailment of buying during July and August. Dealers generally expect business to be slow but in this respect they will just be going back to normal conditions prevailing before the rush for cars in the past two years.

DALLAS

DALLAS, July 18—Canvass of 15 retail automobile concerns in Dallas revealed that sales during the first 10 days of this month showed an increase of from 10 to 15 per cent over sales for the same period in June. Dealers declare this is due to the fact that the marketing of grain crops is pouring some \$30,000,000 into the pockets of the grain growers, and as this money finds its way into other channels, financial stringency is loosened up and cars are bought.

The same retail houses declare prospects now are better than they have been in many months and say they expect to do a banner business during July and August. Another cause of increased sales is said to be the season for touring.

In addition to retailers reporting in-

JULY RETAIL SALES BETTER THAN JUNE

NEW YORK, July 18—Dispatches to Motor World from its correspondents in the principal distribution centers show that the volume of automobile sales at retail for the first half of July has been extraordinarily good as compared with the same period in June. While it is probable there will be the perennial mid-summer decline in the sales curve, it has been deferred later than usual in many cities. July business thus far has been better than either dealers or manufacturers dared hope it would be. Up to this time there has been practically no curtailment of factory operations and in some instances schedules have been increased.

Sales for the first half of July were better than the first fortnight of June in these cities: Detroit, Des Moines, Denver, Salt Lake City, Dallas, Cleveland, Columbus and Indianapolis.

July sales have held their own with June in Chicago, Milwaukee and Philadelphia.

July has shown a falling off as compared with June in New York, Minneapolis, New Orleans and Atlanta.

The Metropolitan slump is due to the universal exodus to summer resorts by persons able to buy cars. In the Northwest interest is centered on the harvest. In the South the continued low price of cotton has exercised a depressing influence.

Increased sales for the first 10 days of July, the used-car dealers declare they have never had better business. Retailers claim they are having more inquiries for cars right now than they had for a year and that generally these inquiries lead to sales.

PHILADELPHIA

PHILADELPHIA, July 18—Retail automobile sales for July thus far compare very favorably with June sales. Prospects are for considerably improved trade. Sales of new cars are 45 per cent of the entire June sales. This is considered owing largely to reduction of prices which is now believed over.

Another good sign is the falling off in sales of used cars, which were good earlier in the season but now are quite flat. In new cars, high priced automobiles are beginning to sell as well, if not better, than the less expensive types.

CHICAGO MAINTAINS SELLING PACE OF JUNE

Virtually All Leading Dealers Say Sales Conditions Are Favorable This Month

CHICAGO, July 18—Business for the month in Chicago is keeping up the pace established in June, and June business, under the influence of reduced prices, was far in excess of recent averages. Buick, Studebaker and Dodge are leading the medium priced car field, but practically all dealers declare sales conditions satisfactory.

Country sales are still slow but showing improvement. There are an increased number of inquiries along the Row, a fact which convinces dealers that there will be a continued steady demand, with a likelihood of a spurt in the agricultural districts following harvesting.

It is realized by dealers that as the effect of price cuts dies down, sales activities must be increased accordingly. Most of the high powered selling organizations are getting into action again and are finding that their efforts are not going unrewarded. Used cars are not much in demand.

MINNEAPOLIS

MINNEAPOLIS, July 18—Business in automobiles has shown a slump in July as compared with June in the Northwest territory. Just now the farmer mind is centered on his harvest and a new spurt cannot be expected until this harvest is in. Crop conditions are generally favorable notwithstanding the long period of hot weather. With a good harvest better conditions are expected.

The Fourth seems usually to be a cut-off line in the motor business, and at that time the public loses interest in new cars—all having bought that have considered the matter seriously.

A large distributing firm with a crop service of its own, which reports a big drop in sales as compared with June last, believes crop news from the sun-burnt districts is mostly local and the crop as a whole promises well, if not a bumper, as expected. In North Dakota three-fourths of the State shows an exceptionally good outlook; in fact, better than last year. This all has a bearing on the fall outlook for motor business.

Wholesale Gasoline Drops

NEW YORK, July 18—Wholesale prices on gasoline have now decreased about 28 per cent since Jan. 1, the price in 30 principal cities averaging to-day 21.1 cents a gallon.

Midwest Cities Take Buying Lead

SALT LAKE DISTRICT SHOWS STEADY GAINS

Sales in Intermountain Territory Improve During Past Two Weeks in July

SALT LAKE CITY, July 18—Retail automobile business in the larger cities and towns in the Intermountain territory has shown a steady improvement during the first half of July. Salt Lake, Ogden and Provo, Utah, and Boise, Idaho, dealers are showing a better working spirit than is manifested by the less highly organized dealers in the smaller towns and communities. Wholesale business is at a standstill and dealers are largely dependent on their retail efforts to equalize their sales.

The retail business is holding up well under the general business slump. Tourist trade during the last six weeks has aided the industry materially, and the repair business is by this reason considerably better than during the spring.

Price reductions coming on the first of July have also helped to stimulate sales. Tires, accessories and batteries are registering a lively trade.

P. F. Drury, assistant general manager of the National Automobile Dealers Association, is visiting in Salt Lake. At an address before the Intermountain Automotive Trades Association, he stressed co-operative methods and association work. From here he will go to Boise then to Portland, Tacoma, Seattle, and he will be in Spokane the 27, 28 and 29 of this month to attend the annual meeting of the Washington Automobile Chamber of Commerce.

NEW ORLEANS

NEW ORLEANS, July 18—Four out of five largest local dealers say the first part of July sales are under sales for the same period in June when business was stimulated by price reductions. The Dodge distributor sold 95 cars in June and is doing about 60 per cent of this business in July. United Motor Car Co., Peerless distributor, reports very light July business.

Capital City Studebaker dealers report sales about one car per day, slightly under the June rate. Bernstein Glenn Co., Buick distributor, reports total sales for spot and future delivery and used cars in excess of June. Cadillac reports about 50 per cent of June business.

DES MOINES

DES MOINES, July 18—Interviews with 10 leading Des Moines dealers show that stimulation of business has

held up well during the first half of the month, in fact, improvement of approximately 20 per cent over June is noted by all dealers. This refers only to retail city sales, as country business with the exception of Dodge, Overland and Ford is practically at a standstill. Final figures for June showed 10 per cent improvement over May.

Eight of 10 dealers interviewed forecast continuance of present business until late September or early October. The other two expect a let-down by late August. Truck sales are at a minimum.

Second-hand car business is brisk at readjustment prices. Money is somewhat easier in the city and collections are fair, but there are no signs of improvement in credit conditions in the country. July sales in the city are practically on a par with July, 1920. The major part of the improvement over conditions of spring and early summer is attributed to the stimulation of price cuts.

DETROIT

DETROIT, July 18—Steadily increasing averages mark daily sales of Detroit dealers in standard automobiles. Volume for the first 14 days of July indicates an average increase for the month over June of 28 per cent. Largest percentage of increases were reported by Dodge, Overland, Buick, Oldsmobile, Studebaker and Hupp dealers, though practically every one reports better business than in June.

Careful investigation of conditions by officials of the Detroit Automobile Dealers' Association shows distributors and dealers optimistic and confident that the increased demand is not a flash in the pan but normal spring business delayed by unsettled price conditions and bad weather during April and May.

DENVER

DENVER, July 18—Automobile sales seem to average slightly better than for the first half of June with less restlessness about further price drops, though some dealers report slower business. One dealer has sold six cars in July against 18 for the first half of June, but he had a rush then because the June 1 price drop attracted waiting buyers. He is now short on certain models demanded and also says July always was a slow month.

Another dealer reports 12 cars sold in July at retail against only three in June for the same period. This dealer believes that price restlessness largely has been overcome, and another distributor expects his July total to exceed June.

Exact registration comparison is impossible because no July licenses are yet entered on the State records.

JUNE SHIPMENTS LEAD APRIL OR MAY FIGURES

N. A. C. C. Report Shows Gain of 8 Per Cent Over Two Previous Months

NEW YORK, July 18—Shipments of automobiles for the month of June, as reported by the National Automobile Chamber of Commerce, were 8 per cent larger than for May and virtually the same as in April. They reached 60 per cent of the mark set in June, 1920.

Carload shipments in June approximated 19,200; there were 18,000 drive-aways and 3700 machines were shipped by boat.

Figuring boat shipments and drive-aways in carload equivalents, shipments for the second quarter of this year nearly doubled the first quarter and were 61 per cent of the second quarter of 1920. Shipments for the second quarter of last year, excluding Ford, were 311,505. Shipments for the same period this year, therefore, were 190,018.

MILWAUKEE

MILWAUKEE, July 18—The June record of retail sales for Milwaukee and vicinity will be maintained for the first half of July. Representative dealers see no indication of material slowing tendency, but do not expect inflation during the remainder of the summer. The public apparently is not satisfied that prices have reached bottom. Rumors of impending supplementary reductions in Ford prices early in August have a disturbing influence on account of the expectancy that other cars must follow.

Expressions by eight big dealers give a general average of equality between sales for the first half of June and July. Distributors report wholesale business smaller, which is customary following the passing of midyear with country districts busy with crops.

ATLANTA

ATLANTA, July 18—Automobile business as a whole is less so far in July than in June for the same period. Companies reducing prices July 1 are experiencing a good increase, but there has been a considerable falling off in sales of those cars reduced June 1. Ford sales are reported exceptionally brisk. Recent reduction in discount rates of the Federal Reserve Bank of Atlanta does not appear to be having any effect on sales. Continued low price of cotton is seriously affecting all lines of business and sales of automobiles to farmers as a result are far below normal.

CHANGES IN CONTRACT PROPOSED BY DEALERS

Consideration Is Given Amendments Offered at Co-operative Committee Meeting

NEW YORK, July 18—The committees representing the National Automobile Chamber of Commerce and the National Automobile Dealers Association in the promotion of closer relations between the manufacturers of motor cars and their distributors are giving close consideration to proposed amendments to the present form of contract. Three important changes have been proposed by the dealers. They cover cancellations of contracts, allotments of motor vehicles and depreciation in the value of motor vehicles and parts. These are the major points covered.

Directors of the N. A. C. C. were to have considered the subject at their meeting in Buffalo last week but the draft of the proposed changes was not received from Harry Harper of Philadelphia, former president of the N. A. D. A., until just before the meeting opened and it was decided to defer any discussion until there had been opportunity to study the subject. In the meantime they will be taken up by the committees in preparation for a joint meeting which will be held in the near future at a date not yet determined.

The committees representing the two organizations are carrying on their discussions in the most friendly spirit and marked progress has been made in the deliberations. There is evident a strong spirit of mutual helpfulness with the realization that what helps the dealer helps the manufacturer, and vice versa.

In addition to contractual relations, the dealers are expected to urge that changes in models and prices be announced in future at the time of the big shows instead of spreading them over the entire year.

TWO STORY BUILDING WITH RAMP RUNWAY

(Continued from page 30)

The result is that the labor and time elements are minimized. There is sufficient space in the shop to contain all cars on which work is being done. If additional space is required for the storage of cars awaiting their turn in the shop or on which work has been completed, part of the garage should be used.

With the exception of a small space at the front of the building which is used for offices, the entire second story is devoted to car storage. The arrangement of cars here is far from ideal. It may be desirable to eliminate the two rows of eight cars opposite the top of the ramp entirely as they interfere with access to the storage space in the front half of the building. If elevators are used, the cars should be stored in four rows, parallel to the longer dimension of the building.

MAY HOLD NEW YORK SHOW IN OLD PLACE

NEW YORK, July 18—The 1922 New York automobile show will be held, in all probability, in the Grand Central Palace instead of in Madison Square Garden as originally proposed. Negotiations to this end have been practically completed although a few details remain to be cleared up. This arrangement, which will be eminently satisfactory to every one concerned, is made possible by the fact that plans for converting the Palace into an office building have been delayed. The Garden still is available in case of emergency but its use would involve very heavy expense because of alterations which would be necessary in the building. The rental charged for the Palace will be much higher than in the past but the N. A. C. C. has decided that nothing must be permitted to interfere with the success of the show next year.

DENBY STOCK ISSUE PLAN MEETS FAVOR

DETROIT, July 18—Creditors of the Denby Motor Truck Co. at a meeting yesterday showed an inclination to join whole-heartedly in the plan of the creditors' committee to issue bonds and first preferred stock in settlement of claims and for raising the necessary working capital.

Twenty-five per cent of the merchandise creditors signed up at the meeting. Favorable action by 75 per cent is expected by the committee.

The plan of the committee is to issue 100,000 class A first mortgage bonds to be used in the discretion of the directors for imperative current needs as working capital; 200,000 class B first mortgage bonds to be pro-rated among creditors, which is equal to about 25 per cent of the total indebtedness, and first preferred stock in an amount sufficient to cover the remainder of all claims, this stock to have priority.

Accessory Men to Form Groups

NEW YORK, July 18—Plans for organization of the entire membership of the Motor and Accessory Manufacturers' Association into groups manufacturing particular lines will be carried out now.

**Automotive
Equipment
Sales Promotion
Week
Aug. 6-13**

CLEVELAND DEALERS EXPECT GOOD MONTH

Sales Thus Far Well Ahead of Averages for the Same Period

CLEVELAND, July 18—Price reductions will make July this year a good month for the local retailer of automobiles, according to statements made by several dealers who were visited at the close of the week July 9.

The first week of July started off with sales well ahead of transactions recorded on an average in the same period in the past several years. July long has been regarded as the first month of declining sales, but this year every dealer noticed a stimulation of sales.

"People are just beginning to realize that their dollar now will buy a hundred cents on the dollar of value in motor car," said F. E. Stuyvesant, Hudson and Essex distributor. "This is true when judged by pre-war price standards. The buyers are beginning to appreciate that the automobile industry is among the first—if not the first—to get its prices down where they belong in view of changed economic conditions."

The Barnes Motor Co., which has the Dodge agency, noticed no let-up in the demand for cars during the first week of July. These six days were filled with as many sales approximately as were the first six days of the previous month.

The Chevrolet had a similar report to make with reference to the first week of July. New cars are moving easy, while used cars are harder to dispose of at this agency.

The Auburn agency will set a new record for July unless there is a complete upset of the dope that was established by sales in the first week of the present month.

The Buick agency did as good business the first six days of this month as it did the first week of June. So did the Oakland, Overland, Willys-Knight, the Jordan, Peerless, Stearns, Templar and Franklin agencies. In fact, Cleveland dealers are doing a satisfactory business generally.

Lincoln Not Reorganizing

DETROIT, July 18—W. C. Leland, president of the Lincoln Motor Co., made the following statement to-day in reference to persistent reports of a reorganization and refinancing of the company:

"Our factory was closed last week for inventory and reopened this morning as it was announced it would do when we shut down. There is absolutely no truth in reports of any reorganization of this company or any change whatever in management. Any report that there is a big refinancing plan for this company under negotiation is absolutely false."

Sixty per cent of the force is at work, at present, and the daily output is about seventeen cars, said Mr. Leland in his statement.

LONG ISLAND FARMERS SEE TRACTORS WORK

Disabled Veterans Prove Advantages of Farming by Motor at Demonstration

FARMINGDALE, L. I., July 18—Interest of the Long Island farmers was only lukewarm in the power farming demonstration which was conducted here by the State Institute of Applied Agriculture. Although the event had been thoroughly advertised throughout the district and in northern New Jersey and the southern tier counties of New York, less than 200 farmers were attracted.

About a dozen machines, products of the older line makers which are in operation on the State farm, participated. They were manned, in most instances, by disabled war veterans who are completing agricultural courses in the college. In addition to the larger tractors there were a few of the smaller garden type machines which were demonstrated by factory representatives in the district.

The plowing and harrowing demonstrations were non-competitive, and there was no attempt made to time operations. Each machine plowed and prepared a strip of land 16 to 20 feet wide and some 200 yards long, and all of them found little difficulty in scurrying through the light, sandy soil at a pretty fair clip.

Although the demonstration was not staged as a merchandise project, but rather a means of impressing the farmers of the vicinity with the facilities at the State institution to help and educate them with their work, the factory representatives and distributors of most of the performing machines were there to capitalize in sales whatever interest was aroused.

Perhaps the small attendance of farmers may be best accounted for by the fact that they have progressed in their education concerning power farming to a point where it no longer is necessary to actually prove that tractors will do the work. The Long Island farmer is using tractors now, to some extent, but many of the farms are too small to make the use of even the smaller types profitable.

The demonstration was under the supervision of A. A. Stone, of the Department of Farm Mechanics, of the college. The State Institute of Applied Agriculture was opened in 1916 and has an enrollment of 200 students, several of whom are disabled war veterans. In addition to its regular courses it conducts a farmer's winter course and co-operates with the farmers in the vicinity by assisting with their problems.

Ottawa Motor Show Sept. 9-17

OTTAWA, ONT., July 18—The Ottawa Motor Show to be held in connection with the Central Canada Exhibition from Sept. 9 to 17 will be the largest thing yet attempted by the Ottawa motor distributors.

TRICKY CAR BUYERS USE SCHEME TO SAVE

NEW YORK, July 18—Passenger car dealers have had experience lately with a new variety of automobile shopper. This person, who does not own a car and so would have none to trade, goes around to a second hand dealer and gets a loan of a used car and a statement of the price for which he can buy it. He then takes the used car and goes shopping around the new car salesrooms, doing his best to trade it in for a new car at an allowance which will give him a considerable margin over the price fixed by the used car dealer.

This custom, which has become quite prevalent and which is depriving dealers of some of the few remaining prospects who made "clean" purchases, has had quite an effect on retail sales conditions, as a number of dealers have overbid each other on the allowance of the used car.

TRADE COMMISSION CALLS RUBBER FIRM INTO COURT

WASHINGTON, July 18—Upon application for the issuance of a complaint the Federal Trade Commission has cited the Diamond Holfast Rubber Co. of Atlanta, Ga., in complaint of unfair competition in the manufacture and sale of automobile accessories and repair materials in interstate commerce. It is alleged that this company marketed its products in such a way as to pass them off as those of the Diamond Rubber Co., a subsidiary of the Goodrich company.

Further allegations are made that the respondent has marketed its products in containers with labels which feature the word "Diamond" and so closely resemble the labels of its competitor, the Diamond Rubber Co., in typographical arrangement, color scheme and general appearance as to cause confusion in trade. Thirty days are allowed for the filing of an answer after which time the case comes for trial on its merits August 9.

The Federal Trade Commission dismissed its complaint of unfair competition against the Super Tread Tire Co., South Bend, Ind., for failure of proof. The complaint alleged that the respondent circulated advertisements imputing that its rebuilt tires were new.

Will Move Plant to Poland

ROCHESTER, N. Y., July 18—Stockholders of the Rochester Auto & Tool Co., a \$75,000 corporation here, owned principally by residents of Polish descent, have voted to remove the equipment of the plant to Jaslo, Poland. The plant has been in existence two years. It was explained that the action was taken because of business depression in this country and the need in Poland for the company's products.

CONGRESS OF DEALERS IN PORTLAND JULY 20

Representatives from Oregon Will Go Seriously Into Automobile Sales Problem

PORTLAND, ORE., July 18—A trade congress, to be devoted to study of present business tendencies in the automobile line for the automobile men of the State of Oregon, has been called for July 20, and automobile dealers from all parts of the State, as well as officials from more distant points, are expected to be in attendance.

The congress will delve carefully into the entire automobile sales problem. The Automobile Dealers Association of Portland, the Oregon State Automotive Dealers' Association, and the State officials of the National Automobile Dealers Association have united in the call for the meeting and are arranging the details of the Portland session.

Stress will be laid on the subject of automobile merchandising and study of markets and selling methods. National and State legislation affecting motor cars and trucks will receive much attention, and the subject of traffic and highway regulations, insofar as they affect the automobile and the truck and the services to the community, will be taken up.

The meeting has been deemed of sufficient importance to the industry on this coast to bring P. F. Drury of St. Louis, assistant general manager of the National Automobile Dealers Association, to this coast, and Mr. Drury will be the principal speaker of the occasion. He has just completed a tour of the Southwest and has attended several recent conferences in the East in which manufacturing and selling problems have been taken up. He is expected to have a message of importance for the Oregon dealers. Others guests from out of the State who are expected are Lieutenant Governor Coyle of Washington, manager of the Washington Automobile Dealers Association; Robert W. Martland of Oakland, Cal., secretary of the California Automobile Trades Association; and Harry D. Austin of Seattle, director in the national dealers association.

Details of the congress are in the hands of A. H. Brown, Oregon vice-president of the National Automobile Dealers Association; James H. Cassell, executive secretary of the Oregon State dealers, and Ralph J. Staehli, executive secretary of the Automobile Dealers Association of Portland.

International Tractors Cut

CHICAGO, July 18—International Harvester Co. to-day reduced prices on three of its tractor models. Titan 10-20 is cut from \$1,000 to \$900, International 8-16, \$1,000 to \$900 and International 15-30 from \$1,950 to \$1,750. Each of these models is equipped with friction clutch pulley and angle lugs. The new prices are effective at once. The price is the lowest quoted by International.

DRIVERS FAVOR SMALL ENGINES FOR RACING

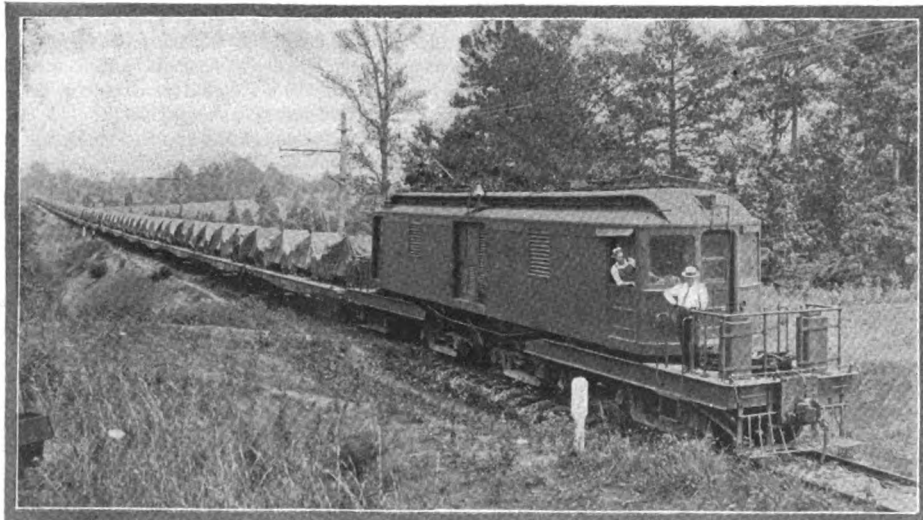
Chevrolet, Wilcox and Others Express Satisfaction at Indianapolis Ruling

INDIANAPOLIS, July 18 — Race drivers in Indianapolis are unanimously in favor of the new ruling of officials of the Indianapolis Motor Speedway to the effect that in 1923 cars entering for the 500 mile race will have to keep the piston displacement at 122 cu. in. Howard Wilcox stated to-day that it was his belief the action on the part of the Indianapolis race course officials would aid materially in developing the motor industry in this country. Louis Chevrolet, who designed two successive winners on the local course, also is in favor of the smaller displacement. Officials of the Duesenberg, while interested in the announcement, said that because they expected to retire from the racing game they were not sufficiently interested to make any special experiments.

With the announcement of the reduction in displacement, Jean Chassagne, who was in the Ballot plant in France for some time and is said to be familiar with the creations contemplated and experiments tried, declares that before two years have passed the smaller engines will be making the speed the larger engines do. He said two two-litre cars now were being perfected in the Ballot and road trials prior to the Grand Prix showed them to make 95 miles.

"Howdy" Wilcox is enthusiastic over the change. He said to-day that while the races might be uncertain the first year, yet some startling surprises would be recorded with the smaller engine. He, like the others, believed the second year would see the small engine on a par with the larger one.

This Dealer Has His Own Train



C. C. Codington, Inc., Buick distributor in Charlotte for the Carolinas, transports his cars from Flint to his storehouse in his own train. This picture shows the first trainload, consisting of 50 cars, carrying 149 automobiles. The train is valued at \$150,000

MATTING SEATS NEW HOT WEATHER VOGUE

TOLEDO, July 18—Willys-Overland, Inc., has been boosting its sales the last two "scorcher" weeks by showing motorists methods of keeping cool. A new type of Japanese matting seat cover has been brought here and made famous by the Overland distributors. It can be fitted to any car. A Willys-Knight equipped with "Nippon Slips" is making an attractive display in the local branch.

ACCESSORY MEN TO HOLD CONVENTION IN DETROIT

NEW YORK, July 18—This year's credit convention of the Motor and Accessory Manufacturers Association will be held at the Hotel Statler, Detroit, Wednesday, Thursday and Friday, Sept. 14, 15 and 16. Tentative plans call for a comprehensive and vital program of papers and discussions, built around the central theme: "Bringing the Automotive Industry Back to Normal."

Detroit was selected this year because of its convenience to the great majority of the 400 companies affiliated with the association. Speakers of national importance from the automotive industry and from industrial, banking and governmental circles will be scheduled for the program. The annual credit convention of the M. A. M. A. is usually regarded as one of the industry's most significant gatherings, for there the credit managers, financial directors and general executives of the unit and equipment manufacturers exchange comments and experiences on current conditions and future prospects for the automotive field.

VERLINDEN'S COUNSEL JUSTIFIES HIS LOAN

Says Money Drawn on Olds Account Was Due Him for One Year

DETROIT, July 18—The action of Edward Verlinden, former manager of the Olds Motor Works and vice-president of General Motors Corp., in drawing a check against the Olds account for \$490,000 is justified by E. C. Shields, attorney for Verlinden, as accruing to Verlinden under the interpretation of his contract existing before the du Pont interests acquired control of General Motors.

In a statement covering the steps which led to the suit against Verlinden, in which the corporation asks restitution of the money, Shields declares there is a discrepancy of more than \$61,000,000 between the statement of 1920 earnings issued to stockholders and the statement upon which President Pierre S. du Pont asked the Olds manager to adjust his contract bonus.

Owing to the unusual growth of the Olds division under Verlinden's management, the statement says, the manager was given a special contract under which he received a percentage of the earnings of the whole corporation. This contract was in force in 1918 and 1919 while W. C. Durant was General Motors head. During these years Verlinden's compensation under the contract was based upon net earnings without any special offsets, and he drew the amount from the Olds Motor Works account as he did in 1920.

Du Pont's Statement

At the end of 1920, however, the statement declares, President du Pont informed him that the profits of the corporation after deducting several charge-offs and write-downs, was \$32,000,000. At about the same time, the statement claims, the annual statement of the corporation for the year 1920 was issued showing net profits of \$93,150,308.

Part of a letter from President du Pont to Verlinden is quoted in the statement in which the executive says that "it is possible that the profits of the several divisions of the corporation used as a basis for computing your compensation may appear out of line with the spirit of your compensation contract." Following receipt of this letter and several conferences in which he objected to the du Pont interpretation of his contract, Verlinden drew the check.

The statement says the manager immediately informed President du Pont of his check and advised him that he would pay the corporation as soon as the stock should be delivered to him. He contends that it was part of his contract that the stock of the General Motors Corp. that was held by the company in his name would be delivered to him whenever he or the company should sever connection with it. This stock, the statement asserts, has not been delivered.

JACOBY ELECTED HEAD OF MITCHELL MOTORS

Industrial Expert Succeeds D. C. Durland Who Has Returned to General Electric

NEW YORK, July 18—William L. Jacoby, an efficiency engineer and industrial expert for A. G. Becker & Co. for the past ten years, has been elected president of the Mitchell Motors Co., Inc., Racine, Wis. He succeeds D. C. Durland, who has returned to the General Electric Co. with headquarters in Chicago. Durland remains a director of the Mitchell company.

Mitchell Motors is controlled by Becker & Co. and Ladenberg, Thalman & Co., of this city. Jacoby was placed in charge of the company's affairs because of his ability as an industrial executive. He has directed in the past many of the industrial enterprises in which Becker & Co. have acquired an interest. His home is in Chicago.

The retirement of Durland is understood to have been voluntary and the position he has taken with the General Electric is considerably more important than the one he relinquished to go with Mitchell Motors.

The Racine company is coming back rapidly and its sales for June were the heaviest for any month in nearly two years. Sales for the first ten days of July went ahead of the June record for that period. The outlook for the company is decidedly encouraging. Its inventory has been reduced to normal proportions and material reductions have been made in its obligations.

13,759 BUICK OWNERS RECEIVE CARS IN JUNE

DETROIT, July 18—Buick Motor Co. delivered 13,759 cars into the hands of owners in June. Shipments last month were 3800 more than those of the entire first quarter and represented actual retail sales at the rate of 530 cars daily compared with peak plant capacity of 600 cars a day.

E. T. Strong, general sales manager, said that Buick figures for June disprove the assertions that the automotive industry is through with big figures. "They are evidence that the industry has earned the right to the title of one of America's greatest industries," he said, "and that the spirit of pessimism prevalent in some quarters did not faithfully represent the sentiment of the public on whom the industry depends for success. The figures are not phenomenal, but may be interpreted as substantial demonstration of the people's tendency to invest in a product which they want and need."

Jordan Sales Show Gain

CLEVELAND, July 18—In June the Jordan Motor Car Co. produced and shipped over 200 cars more than in any month in its history. May also was a peak month showing a 26 per cent production gain.

BIBLICAL QUOTATIONS DANGER WARNINGS

UNIONTOWN, PA., July 18—Instead of the usual danger signals at points in the mountains that require careful driving of motor cars, there now have been placed scriptural warnings. No one seems to know their source. The signs are wooden ones, 3 feet by 2. At the most dangerous curves on the national pike between here and Cumberland are warnings, "Prepare to Meet Thy God," and similar cheerful quotations from the Bible that have an appropriate bearing.

FORD STATEMENT SHOWS STRENGTH FOR LAST YEAR

BOSTON, July 18—The Ford Motor Co., incorporated under the laws of Delaware, has filed with the Commissioner of Corporations of Massachusetts the following statement, dated April 30, 1921:

	1921	1920
Real estate.....	\$71,329,719	\$85,549,727
Machinery	46,459,046	41,661,137
Merchandise	63,848,157	96,859,012
Cash and acct. received	86,995,166	62,499,027
Securities	10,361,963	18,921,608
Accounts payable.....	44,993,755	15,958,116
Notes payable.....	3,892,386	35,112,974
Surplus	182,877,686	165,679,132

SHIPPING OF LIVE STOCK MAY REVERT TO TRUCKS

CHICAGO, July 18—High freight rates are forcing live stock producers to ship by truck, testified A. F. Stryker, secretary and traffic manager of the Omaha Live Stock Exchange, at the freight rate hearing on live stock before the Interstate Commerce Commission here.

"Twenty per cent of the hogs in one day's receipts at Omaha were delivered by truck," he declared. "One day 50 per cent of the sheep received at the St. Joseph market came by truck."

It was estimated that more than 3,000,000 head of cattle, hogs and sheep will be transported by motor truck direct from "farm to yards" during 1921, this being based on the 1920 figures from 17 stock yards in the corn belt. Counting in the smaller stock yards and the number of cattle delivered by truck to railroad sidings and from sidings to stock yards, it was estimated that 6,000,000 animals in all would be handled by truck during the year.

Making New Car for Southwest

SAN ANTONIO, TEXAS, July 18—The Robertson Co. has started the manufacture of an automobile especially adapted to Mexico, Texas and the Southwest. Specific claims are made for gasoline and lubricating oil economy and the design has been especially worked out for pulling on mountains, sand, rock and mud roads.

CAMERON ACQUIRES TRACTOR COMPANY

Takes Over Business of Sandusky Plant—Improved Product Will Cost \$425

NEW YORK, July 18—Cameron Motors Corp. has acquired the Dauch Mfg. Co., manufacturer of the Sandusky tractor at Sandusky, Ohio, and will continue the tractor business alone for the present, later adding production of the Cameron car. The plant, containing 100,000 ft. of manufacturing space, was said by President Cameron to be ample for the proposed needs of the company.

The tractor will be a light farm tractor similar to the one now turned out, and the trade name Sandusky will be continued. The new product, however, will be equipped with a Cameron 4-cylinder air-cooled engine and will sell at about \$425. These will be distributed through the dealer organization built up by the Dauch company, which numbers about 300 members.

Production of the Cameron engine will be continued at the Bridgeport plant of the Liberty Mfg. Co. under contract with the Cameron company. The rest of the tractor will be assembled at Sandusky. There will be no changes in the factory organization until complete plans are worked out covering production and sales.

Decision to manufacture the tractor only, for the present, was said by Cameron officials to be due to the unusual demand for this machine at this time. There are ample orders ahead and production will be speeded up to keep abreast of sales, but it is not expected to get into full production for at least a year.

DURANT CONTRACT GOES TO CONTINENTAL MOTORS

DETROIT, July 18—A contract for several thousand four-cylinder engines for Durant Motors, Inc., has been placed with the Continental Motors Corp. Work on their construction will be started August 1. The Continental plant now is being tooled for production of the motors, which will be of a special type. The output will be increased steadily until it reaches 150 a day. The motors will be shipped to the Durant plant in Long Island City, the factory under construction at Oakland and the main plant in Lansing.

It is understood that negotiations have been virtually completed by Durant Motors for its supply of axles and frames, although contracts have not been formally signed. The axles probably will be made in Detroit and frames in Milwaukee.

Old Timers Get Emblems

DETROIT, July 18—Membership buttons in the Old Timers' Club are now being issued to accepted members by F. Ed. Spooner, secretary. The new emblem is of solid gold inlaid with hard French enamel.

ASSOCIATION ACTIVITIES

Alabama Dealers to Meet

BIRMINGHAM, ALA., July 18—Arrangements for the semi-annual meeting of the Alabama Automobile Dealers' Association, to be held at Coden, Ala., on July 25-26-27 are being completed. Members of the executive committee, M. K. Johnston Tire and Auto Co., Montgomery, president, I. K. Dorsey of the Dorsey Motor Co. of Opelika, Reese Adamson of the Adamson-Ford Co. of Birmingham and R. L. Newman of the Alabama Oldsmobile Co. of Birmingham, met in Birmingham Sunday, June 26, to complete the plans.

Members of the association will be entertained by John E. Rolston of the Rolston Hotel in Mobile en route to Coden for the convention.

A feature of the program will be some "sales stunts," put on by Birmingham dealers before the convention. Mr. Newman, member of the State executive committee of the association will have charge of the stunts.

A program for the session is in the hands of the printer. It provides for a three day convention, during which mutual problems of the members will be discussed. Two days of the time will be devoted to business while the third will be taken up with an all-day barbecue, picnic and outing on the Mississippi Sound.

Alabama's good roads program will be one of the principal subjects of discussion during the meeting. Members of the association are of the opinion that action urging the Legislature of the State to meet in special session and take definite steps on the \$25,000,000 road bond issue will be taken. Through an error in interpretation of the law of the State which provides that the Legislature and not the Governor shall designate the days for special elections, the voting of \$25,000,000 by the State for good roads, to match the offer made by the United States Government to all States, was ruled illegal by the Supreme Court of the State. A quick remedy is necessary if Alabama roads are not to lose \$50,000,000 for building and improvement. This matter will come in for the serious consideration of the automobile dealers of the State.

A great deal of interest is being shown in the meeting of the convention, especially by the dealers in the southern part of the State. An attendance of more than 300 is expected and Mobile members have pledged themselves to a 100 per cent attendance. Arrangements have been made for the Mobile men to return to their homes every night during the convention.

On the final day of the convention delegates will be permitted to bring relatives and friends to the barbecue.

Seek Road Danger Signals

INDIANAPOLIS, July 18—Negligence in marking of highway danger spots by road contractors and highway

officials was condemned in resolutions adopted in the annual meeting of the Hoosier State Automobile Association last week. A. G. Lupton, Hartford City, president; Martin Luecke, Fort Wayne, first vice-president and counsellor, respectively, were re-elected. Other officers elected were E. W. Steinhart, Indianapolis, second vice-president; D. N. Peck, Crawfordsville, third vice-president; C. W. Lanz, Bedford, fourth vice-president; T. A. Wynn, Indianapolis, treasurer; M. E. Noblett, secretary-manager. The board of directors was elected as follows: James A. Hemenway, Boonville; Steve Stalcup, Elnora; Charles W. Lanz, Bedford; T. S. Blish, Seymour; William G. Osborn, Danville; Frank Anstead, Connorsville; Roy E. Adams, Indianapolis; S. G. Phillips, Alexandria; W. H. Arnett, Kokomo; W. J. Schaaf, Gary; C. S. Miller, Huntington; W. H. Willenar, Auburn; A. H. Beardsley, Elkhart; E. W. Steinhart, Indianapolis; Sam Leeper, South Bend; Walter Brown, Frankfort; Fred D. Bethard, Richmond, and Walter Crim, Salem, directors-at-large.

Resolutions indorsing the Townsend highway bill and urging Senators Watson and New to support it for passage were passed and ordered forwarded.

Wayne County Men Dine

RICHMOND, July 18—Fried chicken and fixings regaled the Wayne County Automobile Dealers Association at Cedar Springs, Ohio, last night, one of the first recreational meetings of the summer program. L. M. Shaw, manager of the Indiana Automotive Trade Association, in an address on business methods urged more care in appraisals of used cars, elimination of credits and establishment of a cash basis. In a meeting July 18 a grievance committee will be established. It will become the stabilizer, it is expected, before which all petty differences and rumors will be dissipated without bringing them in to clutter up and embitter the regular business meetings.

Re-elect Toledo Officers

TOLEDO, July 18—A. G. H. Jenssen and George Bender were re-elected president and vice-president of the Toledo Automotive Trades Association at the annual meeting held at the offices in the Nicholas Building last Friday.

The following trustees were named to serve for the coming year: Warren E. Griffith, Charles E. Doan, A. G. H. Jenssen, M. R. Himes, George Bender, A. H. Draine, C. V. Sage, C. A. Vandusen, J. A. Kellam, and H. H. Dennis.

The association now has in operation a novel plan for re-sale of used cars which it has developed in the last six months.

Warren E. Griffith, director, is also president of the state association.

Ray Skinner will continue to be the executive secretary of the organization.

ALL CHEVROLET MODELS REDUCED IN SECOND CUT

DETROIT, July 16—Another reduction in prices on all models in both its lines has been made by the Chevrolet Motor Co., effective July 15. In the "FB" line the touring car and roadster have been cut from \$1,185 to \$975 and the coupé and sedan from \$1,885 to \$1,575. On the "490" models, the touring car has been reduced from \$645 to \$625; the roadster from \$635 to \$625; the sedan from \$1,195 to \$975 and the coupé from \$1,155 to \$975. The prices are f.o.b. factory. This is the second of the General Motors Corp. subsidiaries to make a second price reduction since the readjustments began. The Oakland led the way.

Kissel Cuts Second Time

HARTFORD, WIS., July 15—A second reduction in prices, effective to-day, is announced by the Kissel Motor Car Co. The standard touring car is reduced from \$2,775 to \$2,475, a total cut of \$1,000 since the price readjustment began. The following reductions are made on the "de luxe" models: Speedster and touring car, from \$3,475 to \$2,975; coupé and sedan from \$4,275 to \$3,775. This makes a total reduction of \$800 on all the "de luxe" models.

Kline Open Models Cut

RICHMOND, IND., July 18—Prices on Kline open models have been reduced \$200 by the Kline Kar Corp., the new prices on the roadster and touring models being \$2,090. The enclosed car prices are continued as formerly.

Holmes Cars Reduced

CANTON, OHIO, July 18—Holmes Motor Car Co. has reduced prices on all models \$400. The four and seven-passenger models are reduced from \$3,350 to \$2,950, the coupe from \$4,250 to \$3,850, and the sedan from \$4,550 to \$4,150.

All Corbitt Models Down

HENDERSON, N. C., July 18—Corbitt Motor Truck Co. has reduced prices on all models from \$200 to \$500. Reductions on the 1-ton are from \$2,400 to \$2,200; the 1½-ton, \$2,800 to \$2,600; the 2-ton, \$3,500 to \$3,150; the 2½-ton, \$3,650 to \$3,300; 3½-ton, \$4,500 to \$4,100; and 5-ton, \$5,500 to \$5,000.

Hawkeye Truck Prices Drop

SIOUX CITY, IOWA, July 18—Prices on Hawkeye trucks have been reduced from \$265 to \$645. The 1½-ton is cut from \$2,365 to \$1,850, the 2-ton, \$2,915 to \$2,650, and 3½-ton, \$4,345 to \$3,700. Under the new management plans, as inaugurated two months ago, the company reports a gradual increase in business.

Prices Cut on Klaxon Horns

NEWARK, N. J., July 18—Prices on Klaxon horns have been reduced on all models, the price changes ranging from 75 cents to \$3.

CHANGES IN THE TRADE

Jacob Luff, Milwaukee, has been appointed a city dealer in the Oakland.

Joseph E. Hofweber, LaCrosse, Wis., has been appointed Chalmers and Maxwell dealer in that city and vicinity.

George Blair, formerly general manager for the Pennsylvania Rubber Co. in Philadelphia, is now associated with the Trexler company, accessory dealers in that city.

Ace Motor Car Co. of Milwaukee has been organized to act as distributor of the Ace, and has established headquarters at 441 Jackson Street. A. J. Sibben is general manager.

George H. Williams Co., Milwaukee, has been appointed distributor of the Gardner in Wisconsin. The company also serves as distributor of the Franklin for the greater part of Wisconsin.

Kissel Kar Co. of Milwaukee has been incorporated with a capital stock of \$50,000 to serve as distributor of the Kissel in Wisconsin and retail dealer in Milwaukee and vicinity. A. Carl Hoppe is president and general manager.

India Tire & Rubber Co. has opened a direct factory warehouse in Dallas, Texas, where a large stock of its products will be carried. Harry L. Corbett, formerly associated with the Norwalk Tire & Rubber Co., will be in charge.

C. C. Ligner, of the Denby Motor Truck Co., Detroit, has joined the staff of the Lintner Motor Sales Co., Milwaukee, Wis., distributor of Denby trucks. L. G. Oatman, formerly of the Perego-Clarkson Co., distributor of Republic trucks, also has joined the Lintner company.

Charles Hendy, Jr., has joined the Simplex Corp., Chicago, manufacturer of automobile locks. He was for fourteen years with the Ford company, serving recently as Chicago manager and before that as manager of the Denver plant, where he was familiarly known as "White Paint" Hendy.

Robert D. Black, who was formerly Assistant Sales Manager of The Black & Decker Mfg. Co. of Towson Heights, Baltimore, Md. has been appointed Manager of the Company's Philadelphia Branch Office. Black succeeds W. C. Allen who has been made a special factory representative with headquarters at The Company's Cleveland Branch Office.

C. L. Davis, formerly manager of the Milwaukee branch of The Winton Co., and for the last two years sales manager of the Overland Wisconsin Co., Milwaukee, has become associated with the Sterns Sales Agency, 156 Farwell Avenue, Milwaukee, as manager of wholesale sales. The Stearns Agency is state distributor of the Stearns-Knight and Rolls-Royce.

Waterloo Motor Sales Co. has been formed at Waterloo, Iowa, to take over the assets of the Henry Padden Auto Co. which has been sold under mortgage foreclosure. The company will handle Maxwell and Chalmers. The managers of the new company are D. S. Ramage and C. D. O'Harrow, the latter having been in the automobile business in Waterloo for several years.

A. W. L. Gilpin, for six years manager of the Milwaukee branch of the Ford Motor Co., who on July 1 was promoted to district manager, was tendered a banquet at the Milwaukee Athletic Club by 208 Ford dealers of Wisconsin. Mr. Gilpin has transferred his headquarters to Chicago, as man-

ager of the Middle Western branches and assembling plants.

Arthur F. Raab, president of the Raab Motor Car Co., Buick dealer, and owner of the Janssen Motor Co., Peerless, Cadillac and Franklin dealer at Sheboygan, Wis., has been awarded a franchise for the sale of Ford cars in the city of Milwaukee which is said to be one of the largest individual contracts ever written by the Ford Motor Co. under the present system of merchandising Ford vehicles.

March Motors Co., Milwaukee, for many years distributor of the Mitchell, has been discontinued, following the recent death of Alton J. March, president and general manager. The building has been taken over by the Milwaukee Oldsmobile Sales Co., Olds dealer in Milwaukee county and vicinity. The Mitchell is temporarily without dealer and distributor representation in Milwaukee and Wisconsin, save a direct factory operation. A service station is being maintained at 62 Sixth Street, pending the appointment of a new distributor and dealer.

Enclosed Car Week

What Does the Trade Think?

I HEARTILY approve of an Enclosed Car Week the latter part of September. To make it most effective it should be national in scope. Extensive advertising should be done by all local associations and all salesrooms, especially in the larger cities, should be appropriately decorated for the occasion. In my opinion there will be a larger enclosed car business this fall but we will have to work harder to get this business than ever before.—*Telegram from Jesse A. Smith, president National Automobile Dealers' Association.*

The board of directors of the National Automobile Chamber of Commerce unanimously favored the Enclosed Car Week idea at a meeting in Buffalo last week.

The directors felt that it would be better to have the week held by dealers in their respective communities at times fitting local conditions than to decide upon one week for the whole country, which might suit Maine, for instance, but not Florida.

The board decided to recommend that manufacturers urge their dealers to hold an Enclosed Car Week this fall, leaving the date to the dealers' discretion.

Will Fight State Truck Law

INDIANAPOLIS, July 18—Wholesale arrests of motor truck operators of Indianapolis is threatened as the result of action determined upon in a conference of motor transport interests in which it was elected to continue a court battle against the State truck license law.

DEVICES FOR LIGHTING APPROVED BY BAY STATE

BOSTON, July 18—By working overtime, Motor Vehicle Registrar, Frank A. Goodwin, of Massachusetts was able to announce to-day his first list of devices which he approved as suitable for use in that State. Others will be added from time to time. He has given motorists until August 15 to become familiar with the new law, after which it will be illegal to use any devices other than those approved.

Name of Device	Adjustment	Aim of Beam
Bausch & Lomb.....	1...3" down at 25'	
Brown Reflecto..	Special..	Lamp front vertical
(Adjust for narrowest vertical spread)		
Conaphore Type F		
(colorless glass)....	1...6" down at 25'	
Holophane No Tilt....	1...Horizontal	
Lee Knight.....	1...4½" down at 25'	
Legalite M 111.....	1...Horizontal	
Liberty Type D.....	1...Horizontal	
Macbeth Type D.....	1...Horizontal	
Patterson	1...Horizontal	
Universal	1...6" down at 25'	
Wills-St. Claire.....	1...Lamp front vertical	
	Mirror beam 6" down at 25'	
Alpheco	1...Horizontal	
Bi-Optic	1...6" down at 25'	
Holophane	1...Horizontal	
Liberty	1...3" up at 25'	
National	1...6" down at 25'	
Primolite Type B....	1...Horizontal	
Syndicate Type A....	1...Horizontal	
Violet Ray.....	1...6" down at 25'	
Saferlite	2...6" down at 25'	
Shaler Roadlighter..	*2...Horizontal	
Fractolite	Special...Horizontal	

*See manufacturer's instructions.

"Approved devices are marked as indicated above with the name in full. Special attention is called to the fact that the MacBeth lens is not legal unless the name 'MacBeth Type D' is moulded in the glass; the Legalite lens is not legal unless the name 'Legalite M 111' is moulded in the glass, and the Conaphore is not legal unless it is made of colorless glass and has the name 'Conaphore Type F' moulded in the glass."

Plan Tractor Shows for West

CHICAGO, July 18—Definite decision to hold a tractor show in Minneapolis Jan. 30 to Feb. 4, inclusive, and to hold a show week in Kansas City during the winter, was made by the national demonstration and show committee of the National Implement & Vehicle Association at a meeting here.

**Automotive
Equipment
Sales Promotion
Week
Aug. 6-13**

COMING EVENTS

SHOWS

Denver	Aug. 10-12	Midsummer Exhibition of Cars, Trucks and Camping Equipment, Civic Center, under auspices of the Denver Automobile Dealers Association.
Exposition City, Can.	Aug. 27	Canadian National Automobile Show.
Indianapolis	Sept. 5-10	Automobile and Accessory Show in conjunction with Indiana State Fair, conducted by Indianapolis Automotive Trade Ass'n, John B. Orman, Mgr.
Ottawa, Ont.	Sept. 9 to 17	Ottawa Motor Show.
Cincinnati	Oct. 1-8	Fall Automobile Show, Cincinnati Automotive Dealers' Ass'n, Music Hall.
New York	Nov. 27-Dec. 3	Automobile Salon, Hotel Commodore.
Chicago	January	Automobile Salon, Drake Hotel.
New York	Jan. 7-13	National Automobile Show, under auspices of National Automobile Chamber of Commerce, Madison Square Garden.

ChicagoJan. 28-Feb. 3.. National Automobile Show, under auspices of National Automobile Chamber of Commerce, Coliseum.

RACES

Detroit	July 9-24	Michigan Pike Association Tour, Michigan and Ontario.
Le Mans, France	July 25	Grand Prix.
Uniontown, Pa.	Labor Day	Autumn Classic.
Los Angeles	Nov. 24	Speedway Events.

CONVENTIONS

Coden, Ala.	July 25-26	Midsummer Meeting of Alabama Automobile Dealers' Ass'n.
Chicago	Oct. 12-14	National Implement & Vehicle Association Convention, Congress Hotel.
Chicago	Nov. 14-19	Annual Meeting and Business Exhibit of Automotive Equipment Association.
New York City	Nov. 22-24	Semi-Annual Convention of Factory Service Managers, N. A. C. C., H. R. Cobligh, Secretary.

The New Car and Truck Description Index

Giving the date and page number on which they appeared

Cars

Ace	Jan. 12, 1921-15
Ambassador	Feb. 2, 1921-11
Buick, 1921	Aug. 18, 1920-14
Collinet (Salon)	Nov. 24, 1920-18
Duesenberg 8	Nov. 17, 1920-33
Essex (Cabriolet)	Nov. 10, 1920-35
Fergus, 1921	Jan. 12, 1921-23
Forster	Aug. 25, 1920-33
Friend	Jan. 12, 1921-14
Globe Four	Oct. 20, 1920-32
Handley-Knight Four	Nov. 17, 1920-32
Haynes Model 50	Jan. 12, 1921-20
Jackson Four	Jan. 12, 1921-18
Kelsey	Dec. 1, 1920-31
Kenworthy 8	Jan. 12, 1921-13
Kissel Coach Sedan	Jan. 19, 1921-21
Lafayette (Coupe)	Oct. 27, 1920-40
Lexington Series T	Jan. 5, 1921-32
Liberty (Coupe)	Aug. 18, 1920-31
Lincoln	Sept. 8, 1920-34
McFarlan Type 147	Oct. 27, 1920-41
Mercer (limousine)	Aug. 18, 1920-37
Mercedes (Post War Model)	Oct. 20, 1920-33
Milburn Electric (38D & 38T)	Jan. 12, 1921-21
Moller	Mar. 30, 1921-21
Nash Four	Nov. 10, 1920-34

National (Sextet Phaeton)	Dec. 15, 1920-36
Navarre	Jan. 12, 1921-13
Northway 6	Jan. 12, 1921-13
Oldsmobile Light 8	Mar. 9, 1921-33
Oldsmobile (Model 43-A)	Dec. 15, 1920-33
Packard Single Six	Sept. 29, 1920-32
Paige Big Six (Six-66)	Sept. 1, 1920-34
Parenti	Jan. 12, 1921-14
Piedmont 4.30	June 29, 1921-30
Pierce-Arrow	Nov. 24, 1920-32
Premocar Special	Feb. 9, 1921-23
Rolls-Royce	Mar. 23, 1921-32
R & V Knight Four	Jan. 12, 1921-16
Scripps-Booth Six	July 13, 1921-32
Sheridan Eight	Oct. 6, 1920-32
Simplex Six	Aug. 4, 1920-40
Stanwood Six	Sept. 15, 1920-31
Sterling Knight	Feb. 2, 1921-11
Stevens-Duryea	Dec. 1, 1920-30
Wills-Sainte Claire	Mar. 16, 1921-28
Wills Sainte Claire Roadster	July 20, 1921-33

Trucks

Acme (¾ ton)	April 13, 1921-33
Akron Multitruck (1 ton)	Feb. 9, 1921-32
Arles (5 ton)	Jan. 12, 1921-49
Armleder (1 ton)	Nov. 10, 1920-37
Available (1½ ton)	Aug. 4, 1920-32

Avery (1 ton)	Nov. 10, 1920-36
Bessemer (4 ton)	Jan. 12, 1921-30
Bollstrom (4 ton)	Nov. 24, 1920-34
Bridgeport (1½, 2½ & 6 ton)	Jan. 12, 1921-30
Brockway (Highway Express)	Jan. 26, 1921-25
Case (2 ton)	Feb. 16, 1921-16
Clinton (1½, 2½, 3½ & 5 ton)	Jan. 12, 1921-30
Commerce (Mercantile Exp.)	Nov. 10, 1920-37
Cyclone (1½ ton)	Mar. 30, 1921-32
Duplex (2½ ton)	Aug. 18, 1920-31
Eagle (2 ton)	Aug. 11, 1920-32
Federal (5-6 ton)	May 4, 1921-32
Gramm-Bernstein (1 ton)	Nov. 10, 1920-35
Grant (1½ ton)	Aug. 11, 1920-32
G. & J. (2 & 3½ ton)	May 11, 1921-32
G. M. C. (K-15, ¾ ton; K-16, 1 ton; K-41, 3½ ton; K-101, 5 ton)	Mar. 2, 1921-28
Huffman (Models B & C 1 & 2½ tons)	June 29, 1921-30
Inter. Harvester (¾ ton)	Feb. 16, 1921-32
Kissel Speed Truck (1 ton)	Mar. 23, 1921-33
Lone Star (1½ ton)	Oct. 27, 1920-30
Lorain (2 ton)	Sept. 1, 1920-30
Mack (double red, axles)	Jan. 5, 1921-33
Moline farm truck (1½ ton)	Nov. 10, 1920-36
Pierce-Arrow (2 ton x 5, 3½ ton, W-2; 5 ton, r-10)	Sept. 8, 1920-30
Rainier (¾ & 5 ton)	Jan. 12, 1921-31
Republic (¾ ton)	July 20, 1921-33
Republic Express, Model 10	Mar. 30, 1921-21
Rumely (1½ ton)	Nov. 10, 1920-36
Service Speed Wagon (1 ton)	Feb. 16, 1921-32
Standard 5-K (5 ton)	Apr. 13, 1921-33
Stoughton (1 ton)	Feb. 23, 1921-33
Stoughton (1½, 2 & 3 ton)	Aug. 25, 1920-33
Transport (¾ ton)	Nov. 3, 1920-31
Ward La France (5 ton)	Jan. 12, 1921-30
Winther	Feb. 2, 1921-11

FOUR DUESENBERG CARS WILL RACE IN GRAND PRIX

INDIANAPOLIS, July 18—American interest in the French Grand Prix, which will be run at Le Mans July 25, will be centered in the four Duesenberg cars which will face the starter. It is the first time in 14 years that an American entry has appeared in the European racing classic.

The drivers who will pilot the cars in the Grand Prix are thoroughly familiar with them and have previously driven them in races. Joe Boyer and his mechanic, Erne Olson, sailed for France early last month, and Jimmie Murphy two

weeks later. The other pilots will be Guyot and Inghibert, French veterans.

Two Cars Out of Grand Prix

(By Cable to Motor World)

PARIS, July 16—The Talbot-Darracq and Sunbeam entries for the French Grand Prix which is scheduled for July 25 at Le Mans, have been withdrawn because of dissatisfaction with the rules of the Automobile Club of France limiting the practice hours. The Fiat entries previously had been withdrawn on the ground that the race would not be representative of the best cars in Europe. The race may be abandoned.

SYRACUSE SERVICE MEN ENJOY ANNUAL FROLIC

SYRACUSE, July 18—Ninety members of the Automotive Service Association of Syracuse frolicked yesterday on the first annual outing at Bennett's Inn, Mandanna.

Leaving the Court House at 1:30 o'clock in a fleet of automobiles, the party drove to the resort. Athletic games were staged in the afternoon. The feature was an automobile stunt race, which was won by C. H. Gunning. Len Patchett was victor in the bulls-eye throw. Salesmen met the service men in a ball game later.

Specifications of Current Passenger Car Models

NAME AND MODEL	Engine Make	Cylinders: Bore and Stroke	WB	Tires	2-Pass.	5-Pass.	7-Pass.	Coupe	Sedan	NAME AND MODEL	Engine Make	Cylinders: Bore and Stroke	WB	Tires	2-Pass.	5-Pass.	7-Pass.	Coupe	Sedan
Ace.....G	Guy.	6-3 1/2x5	123	32x4	\$2975	\$2975	\$3680	\$3680	Maibohm.....B	Falls.	6-3 1/2x4 1/2	116	32x4	11575	\$1575	11750	\$2395	\$2395
Ace.....H	H-S.	6-3 1/2x5	123	32x4	2975	2975	3680	3680	Marmion.....34	Ow.	6-3 1/2x5 1/2	136	32x4 1/2	4185	13985	3085	4575	5275
Ace.....L	H-S.	4-3 1/2x5	116	32x4	2260	2260	....	....	....	Maxwell.....25	Ow.	4-3 1/2x4 1/2	109	30x3 1/2	845	845	1445	1545
Allen.....Series 43	Ow.	6-3 1/2x5 1/2	110	32x4	1385	1385	....	2195	2195	McFarlan.....1921	Ow.	6-4 1/2x6	140	33x5	6300	6300	7500	7500
Ambassador.....R	Cont.	6-3 1/2x5 1/2	136	33x5	14500	14500	....	6500	6500	Mercer.....Series 5	Ow.	4-3 1/2x6 1/2	132	32x4 1/2	4500	4500	5700	6200
American.....C	H-S.	6-3 1/2x5	127	32x4	2195	2275	12350	3150	3150	Merit.....Cont.	Ow.	6-3 1/2x4 1/2	119	32x4	2245	2245	....	....
Anderson.....Series 40	Cont.	6-3 1/2x4 1/2	120	33x4	2195	1795	1845	2795	2795	Meteor.....R & RR	Dues.	4-4 1/2x6	129	32x4 1/2	5500	5500	....	....
Apperson.....8-21-S	Ow.	8-3 1/2x5	130	34x4 1/2	....	13000	3250	4500	4500	Mietz.....M6	Rut.	6-3 1/2x5	120	32x4	1995	1995	2795	2895
Apperson.....Anniversary	Ow.	8-3 1/2x5	130	34x4 1/2	....	13500	3750	....	....	Mitchell.....F-40	Ow.	6-3 1/2x5	120	33x4	1490	1490	2590	2690
Auburn.....6-3C	Cont.	6-3 1/2x4 1/2	120	33x4	....	1695	1695	2795	2795	Mitchell.....F-42	Ow.	6-3 1/2x5	127	33x4	....	1995	....	....
Beggs.....20T	Cont.	6-3 1/2x4 1/2	120	33x4	1775	1775	....	2675	2775	Moller.....A	Ow.	4-2 1/2x4	100	27x3 1/2	2000	....	....	....
Bell.....4-32	H-S.	4-3 1/2x5	114	31x4	....	1495	....	....	....	Monroe.....S-9 & 10	Ow.	4-3 1/2x4 1/2	115	32x3 1/2	1295	1295	....	....
Bell.....6-50	H-S.	6-3 1/2x5	124	32x4	....	1095	....	....	....	Monroe.....S-11 & 12	Ow.	4-3 1/2x4 1/2	115	33x4	....	2075	2175	
Biddle.....81	Buda	4-3 1/2x5	121	32x4	3475	3475	....	3975	3975	Moon.....6-48	Cont.	6-3 1/2x4 1/2	122	32x4	2085	1985	2985	2985
Birch Super-Four	H-S.	4-3 1/2x5	117	33x4	1345	1345	11395	2295	2295	Murray-Mac Six	Ow.	6-3 1/2x5 1/2	128	34x4 1/2	4250	4250	....	....
Birch Light Four	Lelt.	4-3 1/2x4 1/2	108	30x3 1/2	1195	1195	....	....	....	Nash.....681-7	Ow.	6-3 1/2x5	121	33x4	1525	1545	1695	2395
Birch Light Six	H-S.	6-3 1/2x5	117	33x4	1595	1595	....	....	....	Nash.....682	Ow.	6-3 1/2x5	127	34x4 1/2	....	1095	....	....
Baur-Davis.....21S	Cont.	6-3 1/2x4 1/2	126	33x4 1/2	12385	12385	2385	....	....	Nash Four.....41-4	Ow.	4-3 1/2x5	112	32x3 1/2	1175	1195	1735	1935
Brewster.....91	Ow.	4-4 x5 1/2	125	32x4 1/2	7000	7000	....	10500	10500	National Sextet	BB	6-3 1/2x5 1/2	130	32x4 1/2	2990	2990	3990	3990
Briscoe.....4-34	Ow.	4-3 1/2x5	109	31x4	1085	1085	....	1685	1685	Nelson.....D	Ow.	4-3 1/2x4 1/2	104	32x4	1900	....	....	....
Brook.....S-21 A	Ow.	2-3 1/2x3 1/2	90	28x3	395	395	....	....	....	Noma.....1C	Cont.	6-3 1/2x4 1/2	128	32x4 1/2	3000	3200	4450	4450
Buick.....1922-44-5-6-7	Ow.	6-3 1/2x5 1/2	118	33x4 1/2	1495	1525	....	2135	2435	Northway	Ow.	6-3 1/2x5 1/2	128	33x5	4200	4200	5600	5400
Buick.....1922-48-9-50	Ow.	6-3 1/2x5 1/2	124	34x4 1/2	....	....	1735	2325	2635	Norwalk.....430-KS	Lyc.	4-3 1/2x5	116	32x3 1/2	....	1135	....	....
Bush.....E.C.A.	Lyc.	6-3 1/2x5	116	33x4	....	1245	....	....	....	Oakland.....34-C	Ow.	6-2 1/2x4 1/2	115	32x4	1095	1145	1625	1725
Bush.....E.C.B	Rut.	6-3 1/2x5	116	33x4	1295	1575	....	2050	2150	Ogren.....6-60	Ow.	6-3 1/2x5 1/2	134	33x5	13850	3750	3900	5000
Cadillac.....59	Ow.	8-3 1/2x5 1/2	125	34x4 1/2	3790	3790	....	4950	5190	Oldsmobile.....43-A	Ow.	4-3 1/2x5 1/2	115	32x4	11325	1545	1895	2100
Carroll.....C	Roch.	6-3 1/2x5	128	....	3985	3985	....	....	....	Oldsmobile.....37A	Ow.	6-2 1/2x4 1/2	112	32x4	1450	1450	2145	2145
Carroll.....D	Roch.	6-3 1/2x5	128	....	3185	3185	....	....	....	Oldsmobile.....46	Ow.	8-2 1/2x5 1/2	122	33x4 1/2	....	1875	2275	2775
Case.....V	Cont.	6-3 1/2x5 1/2	117	32x4 1/2	....	2250	2250	2900	3285	Oldsmobile.....47	Ow.	8-2 1/2x5 1/2	115	32x4	....	1725	2225	2425
Chalmers.....6-30	Ow.	6-3 1/2x5 1/2	122	32x4	1495	1545	....	2295	2445	Overland.....4	Ow.	4-3 1/2x4	100	30x3 1/2	695	695	1000	1275
Chalmers.....6-30	Ow.	6-3 1/2x5 1/2	122	32x4 1/2	....	....	1795	....	....	Packard.....Single-Six	Ow.	6-3 1/2x4 1/2	116	33x4 1/2	2975	2975	3750	3975
Champion.....Tourist	Lyc.	4-3 1/2x5	113	32x3 1/2	....	1095	....	....	....	Packard.....Twin Six	Ow.	12-3 x5	136	35x5	4850	4850	6600	6800
Champion.....Special	H-S.	4-3 1/2x5	118	32x4	1395	1395	....	....	....	Paige.....6-42	Ow.	6-3 1/2x5	119	32x4	1635	1635	1925	2450
Chandler.....Six	Ow.	4-3 1/2x4	102	30x3 1/2	635	645	....	1155	1195	Pan.....6-66	Cont.	6-3 1/2x5	131	33x4 1/2	2975	3295	2875	3890
Chevrolet.....49B	Ow.	4-3 1/2x4	102	30x3 1/2	635	645	....	1155	1195	Pan American E&F	H-S.	6-3 1/2x5	108	33x4	2000	2000	....	....
Chevrolet.....49B	Ow.	4-3 1/2x4	102	30x3 1/2	635	645	....	1155	1195	Parenti.....1921	Ow.	8-2 1/2x4 1/2	125	32x4	....	2000	....	....
Chevrolet.....49B	Ow.	4-3 1/2x4	102	30x3 1/2	635	645	....	1155	1195	Paterson.....650	Cont.	6-3 1/2x4 1/2	120	33x4	....	1895	2895	2895
Cleveland.....40	Ow.	6-3 x4 1/2	117	32x4	1295	1295	....	2195	2295	Peelless.....56-S-7	Ow.	2-3 1/2x3 1/2	90	28x3	385	....	....	....
Clumber Four	H-S.	4-3 1/2x5	125 1/2	32x4 1/2	2250	2250	....	....	....	Peters.....4-30	Lyc.	4-3 1/2x5	116	32x3 1/2	....	1270	....	....
Clumber Six	H-S.	6-3 1/2x5	127	33x5	2560	2695	2795	3695	3995	Piedmont.....6-40	Cont.	6-3 1/2x4 1/2	122	32x4	....	1495	....	....
Cole.....879	Nort.	6-3 1/2x4 1/2	115	32x4	1795	1795	....	2495	2595	Piedmont.....6-40	Ow.	6-4 x5 1/2	138	35x5	8000	17500	7500	8500
Columbia.....D-C & CS	Cont.	6-3 1/2x4 1/2	115	32x4	1795	1795	....	2495	2595	Pierce-Arrow	Ow.	6-3 1/2x5	120	32x4	1945	1895	....	....
Comet.....C-53	Cont.	6-3 1/2x4 1/2	125	33x4 1/2	....	2350	2450	3650	3650	Pilot.....6-45	Testor	6-3 1/2x5	120	32x4	2285	2285	3350	3400
Commonwealth.....44	H-S.	4-3 1/2x5	117	32x4	....	1595	....	2465	2465	Pilot.....6-50	H-S.	6-3 1/2x5	142	35x5	6750	3790	4690	5190
Crawford.....21-6-40	Cont.	6-3 1/2x4 1/2	122 1/2	32x4	3000	3000	....	4500	4500	Porter.....6-D	Ow.	6-3 1/2x5 1/2	126 1/2	33x5	3790	3690	4690	5190
Crow-Elkhart.....L63-65	Lyc.	4-3 1/2x5	117	32x3 1/2	1295	1295	....	2395	2395	Premcar.....6-40 A	Falls.	6-3 1/2x4 1/2	117	32x3 1/2	....	1295	....	....
Crow-Elkhart.....S63-65	H-S.	6-3 1/2x5	117	33x4	11545	1455	....	....	....	Raleigh.....A-6-60	H-S.	6-3 1/2x5	122	32x4 1/2	2250	2250	3100	3200
Daniels.....D-19	Ow.	8-3 1/2x5 1/2	132	34x4 1/2	15350	15350	5350	6250	6950	R & V Knight.....R	Ow.	4-3 1/2x5	116	32x4	....	2150	2850	2950
Davis.....61-67	Cont.	6-3 1/2x4 1/2	120	33x4	11995	1895	12150	2795	2795	R & V Knight.....J	Ow.	6-3 1/2x4 1/2	127	32x4 1/2	3350	3350	4000	4200	
Dispatch.....Wise	Wise	4-3 1/2x5	120	34x4	1250	1350	1525	1575	1575	Reo.....T-6	Ow.	6-3 1/2x5	120	33x4	1850	1850	2700	2750	
Dixie Flyer.....H-S-70	H-S.	4-3 1/2x5	112	32x4	1445	1445	....	2295	2345	Reo.....C	Dues.	4-3 1/2x6	131	32x4 1/2	4550	4650	4650	6500
Dodge Brothers	Ow.	4-3 1/2x5	114	32x3 1/2	935	935	....	1585	1785	Romer.....6-54-E	Cont.	6-3 1/2x5 1/2	138	32x4 1/2	....	2000	2100	2450
Dorris.....6-80	Ow.	6-4 x5	132	33x5	....	14785	4785	5800	6090	Romer.....6-54-E	Cont.	6-3 1/2x4 1/2	120	32x4	2000	2000	2100	2450
Dort.....17-12	D-Ly	4-3 1/2x5	108	31x4	985	985	1535	1685	Rolls-Royce.....Ow.	Ow.	6-4 1/2x4 1/2	143 1/2	33x5	U.S. Price	11750
Dupont.....A	Ow.	4-3 1/2x5 1/2	124	32x4 1/2	3400	3400	....	4900	4900	Saxon.....125	Ow.	4-3 1/2x5	112	32x4	....	1495	....	....
Elcar.....K-4	Lyc.	4-3 1/2x5	117	33x4	1300	1300	....	2500	2600	Sayers Six.....DP	Cont.	6-3 1/2x4 1/2	118	33x4	2495	2195	....	....
Elcar.....7-R	Cont.	4-3 1/2x5	117	33x4	1700	1700	....	2395	2395	Scripps-Booth.....B-39-42	Nort.	6-2 1/2x4 1/2	115	32x4	1275	1295	1950	2100
Elgin.....K-1	Falls.	4-3 1/2x4 1/2	118	33x4	1595	1495	....	2395	2395	Scripps-Booth.....L & O	Cont.	6-3 1/2x4 1/2	115	32x4	1470	1490	2550	2375
Essex.....Ow.	Ow.	4-3 1/2x5	108 1/2	32x4	1445	1445	....	1950	2300	Severin.....L & O	Lelt.	4-3 1/2x4 1/2	108	30x3 1/2	1045	1045	....	....
Fergus.....S-5-21	Ow.	6-3 1/2x5	126	33x4 1/2	....	Chassis Price	8500	....	....	Severin.....Six	Cont.	6-3 1/2x5 1/2	122	33x4	1485	1485	2100	2250
Ferris.....Cont.	Cont.	6-3 1/2x5 1/2	130	32x4 1/2	3350	....	4100	....	....	Severin.....Six	Cont.	6-3 1/2x5 1/2	122	33x4	2550	2550	3250	3350
Ford.....T	Ow.	4-3 1/2x4	100	30x3 1/2	370	....	695	760	760	Sheridan.....4	Nort.	4-4 1/2x5 1/2	116	33x4	1485	1485	2060	2360
Franklin.....9-B	Ow.	6-3 1/2x4 1/2	115	32x4	2550	2550	....	3650	3650	Sheridan.....8	Nort.	8-3 1/2x5 1/2	132	33x5	....	....	....	....
Friend.....Four	Ow.	4-3 1/2x5 1/2	112	32x3 1/2	1285	1285	....	1985	2085	Skelton.....35	Lyc.	4-3 1/2x5	112	32x3 1/2	1295	1295	....	....
Gardner.....G	Lyc.	4-3 1/2x5	112	32x3 1/2	1995	1995	....	1795	1795	Southern Six.....660-2	H-S.	6-3 1/2x5	127	32x4 1/2	2875	2875	2995	....
Globe.....B-10	Supre.	4-3 1/2x5	115	32x4	....	....	....	....	....	Standard.....J	Ow.	8-3 1/2x5	127	34x3 1/2	3400	3400	4500	4500

Specifications of Current Motor Truck Models

NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive
				Front	Rear						Front	Rear						Front	Rear	
Acason	1 1/2	\$1650	3 1/2 x 5	34x5 1/2	34x5 1/2	W	Cook, 41	2	\$3000	4 x 5 1/2	36x6 1/2	38x7 1/2	I	Gary, I	1 1/2	\$2550	4 x 5 1/2	36x3 1/2	36x5	W
Acason, R	1 1/2	2260	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Corbett, E	1	2200	3 1/2 x 5 1/2	34x3 1/2	34x4	W	Gary, J	2 1/2	3150	4 1/2 x 5 1/2	36x4	36x7	W
Acason, RB	1 1/2	2485	3 1/2 x 5 1/2	36x3 1/2	36x6	W	Corbett, D	1 1/2	2600	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Gary, K	3 1/2	4050	4 1/2 x 6	36x5	40x5d	W
Acason, H	2 1/2	3295	4 1/2 x 5 1/2	36x4	36x4d	W	Corbett, C	2	3150	4 1/2 x 5 1/2	36x3 1/2	36x7	W	Gary, M	5	5150	5 x 6 1/2	36x6	40x6d	W
Acason, L	3 1/2	4295	4 1/2 x 5 1/2	36x5	36x5d	W	Corbett, B	2 1/2	3300	4 1/2 x 5 1/2	36x4	36x7	W	Gorais M	1 1/2	3100	4 x 5 1/2	36x3 1/2	36x7	W
Acason, M	5	5250	5 x 6 1/2	36x6	40x12	W	Corbett, A	3 1/2	4100	4 1/2 x 5 1/2	36x5	36x10	W	Gorais K	1 1/2	3500	4 1/2 x 5 1/2	36x4	36x8	W
Ace, C	1 1/2	2295	3 1/2 x 5 1/2	34x3 1/2	34x5	W	Corbett, AA	5	5000	4 1/2 x 6	36x6	40x6d	W	Gorais	3 1/2	4500	4 1/2 x 6	36x5	40x12	W
Ace, A	2 1/2	2795	4 1/2 x 5 1/2	36x4	36x7	W	Cyclone	1 1/2	2800	3 1/2 x 5	34x5 1/2	36x6 1/2	I	Giant, 15-A	1 1/2	2250	3 1/2 x 5	34x3 1/2	34x5	W
Acme, G	1 1/2	.....	3 1/2 x 5	35x5 1/2	35x5 1/2	W	Dart, S	1 1/2	.....	3 1/2 x 5 1/2	34x3 1/2	34x6	W	Giant, 16	2	3150	4 1/2 x 5 1/2	36x4	36x7	W
Acme, B	1	.....	3 1/2 x 5	34x3 1/2	34x5	W	Dart, M	1 1/2	.....	4 1/2 x 5 1/2	36x4	36x7	W	Giant, 17	3 1/2	4150	4 1/2 x 5 1/2	36x5	36x5d	W
Acme, F	1 1/2	.....	3 1/2 x 5	34x3 1/2	34x5	W	Dart, W	2 1/2	.....	4 1/2 x 6	36x5	36x10	W	Globe D-20	1 1/2	1495	3 1/2 x 5	33x4 1/2	33x4 1/2	B
Acme, A	2	.....	4 1/2 x 5 1/2	36x4	36x7	W	Day-Elder, A	1	2225	3 1/2 x 5	34x3 1/2	34x4	W	Globe	1	1495	3 1/2 x 5	33x5	33x5	B
Acme, C	3 1/2	.....	4 1/2 x 5 1/2	36x5	40x10	W	Day-Elder, B	1 1/2	2425	3 1/2 x 5	34x3 1/2	34x6	W	Golden West, GH	3	5000	4 1/2 x 6	36x7	36x7	W
Acme, E	5 1/2	.....	4 1/2 x 6	36x6	40x12	W	Day-Elder, D	2 1/2	2900	4 1/2 x 5 1/2	36x4	36x7	W	Golden West, G	3 1/2	4500	4 1/2 x 6	36x6	36x6	W
Akr's Multi-Trk 20	1	1995	4 x 5 1/2	34x5	34x5	B	Day-Elder, E	3 1/2	3125	4 1/2 x 5	36x4	36x7	W	Golden West, H	3 1/2	5000	4 1/2 x 6	36x6	36x6	W
All-Power, C	3 1/2	5800	4 1/2 x 6	36x7	36x10	W	Day-Elder, F	5	3950	4 1/2 x 5 1/2	36x5	36x5d	W	Golden West, T	4	5500	4 1/2 x 6	36x6	36x6	W
All-American, B-1	1 1/2	1705	3 1/2 x 5	32x4	32x4	W	Day-Elder, G	5	4875	4 1/2 x 6	36x5	36x6d	W	Golden West, K	7	6000	4 1/2 x 6	36x6	36x6	W
All-American, C-1	1 1/2	2195	3 1/2 x 5	34x4	34x5	W	Dearborn, F	1 1/2	2180	3 1/2 x 5 1/2	34x4	34x5	W	Golden West, HA	7	6000	4 1/2 x 6	36x6	36x10	W
American, 25	2 1/2	3350	4 x 6	36x4	36x4d	W	Dearborn, 48	2	2590	3 1/2 x 5 1/2	35x5 1/2	34x7 1/2	W	Gove, A-1	2 1/2	2495	4 1/2 x 5 1/2	36x4	36x7	I
American, 40	4	4275	4 1/2 x 6	36x5	36x5d	W	Dehance, G	1	1975	3 1/2 x 5	35x5 1/2	35x5 1/2	W	Graham Bros. A	1 1/2	1495	3 1/2 x 5	33x5 1/2	33x5 1/2	I
Apex, G	1 1/2	1075	3 1/2 x 5	33x5 1/2	33x5 1/2	W	Dehance, D	1 1/2	2050	3 1/2 x 5	35x5 1/2	36x6 1/2	W	Gramm-Bern, 10	1 1/2	2050	3 1/2 x 5	36x3 1/2	36x5	I
Apex, D	1 1/2	1915	3 1/2 x 5	34x3 1/2	34x5	W	Dehance, E	2	2750	3 1/2 x 5	35x5 1/2	36x7 1/2	W	Gramm-Bern, 65	1 1/2	2725	3 1/2 x 5	36x3 1/2	36x5	W
Apex, E	2 1/2	2095	4 1/2 x 5 1/2	36x4	36x7	W	DeKalb, E2 1/2	2 1/2	2600	4 1/2 x 5 1/2	36x4	36x6	W	Gramm-Bern, 20	2	3175	4 1/2 x 5 1/2	36x4	36x7	W
Apex, F	3 1/2	3975	4 1/2 x 6	36x5	36x10	W	DeKalb, E2	2 1/2	2250	4 1/2 x 5 1/2	34x3 1/2	34x6	W	Gramm-Bern, 25	2 1/2	3575	4 1/2 x 5 1/2	36x5	40x5d	W
Armstrong, 20	1	.....	3 1/2 x 5 1/2	34x3 1/2	34x5	W	DeMartini 1 1/2	1 1/2	2600	3 1/2 x 5	34x3 1/2	34x6	W	Gramm-Bern, 35	3 1/2	4375	4 1/2 x 5 1/2	36x5	40x5d	W
Armstrong, HW	2 1/2	.....	3 1/2 x 5 1/2	36x4	36x7	W	DeMartini 2	2	3300	4 x 5 1/2	36x3 1/2	36x7	W	Gramm-Bern, 50	5	5275	4 1/2 x 6	36x6	40x6d	W
Armstrong, KW	3 1/2	.....	3 1/2 x 5 1/2	36x5	36x5d	W	DeMartini 3	3	4250	4 1/2 x 5 1/2	36x4	36x10	W	Hahn, J4	1	.....	3 1/2 x 5	34x5	34x5	W
Atco, B	1 1/2	.....	3 1/2 x 5 1/2	34x5 1/2	36x6 1/2	W	DeMartini 4	4	4800	4 1/2 x 6	36x5	36x12	W	Hahn, CD	1 1/2	.....	4 1/2 x 5 1/2	36x3 1/2	36x8	W
Atco, B1	1 1/2	.....	3 1/2 x 5 1/2	34x5 1/2	36x6 1/2	W	Denby, 12	1	1625	3 1/2 x 5	35x5	36x6	I	Hahn, EE	2 1/2	.....	4 1/2 x 5 1/2	36x4	36x8	W
Atco, A	2 1/2	.....	3 1/2 x 5 1/2	36x4	36x8	W	Denby, 33	1 1/2	2300	3 1/2 x 5	35x5 1/2	36x7 1/2	W	Hahn, F	3 1/2	.....	4 1/2 x 5 1/2	36x5	36x10	W
Atlas, M.D.	1	.....	3 1/2 x 5	32x4 1/2	32x4 1/2	W	Denby, 134	2	2800	3 1/2 x 5	36x3 1/2	36x6	W	Hahn, EP	1	2450	4 1/2 x 5	35x5 1/2	35x5 1/2	W
Atterbury, 20R	1 1/2	2775	3 1/2 x 5	34x3 1/2	34x5	W	Denby, 25	3	3300	4 1/2 x 5 1/2	36x4	36x7	W	Hal Fur, E	1 1/2	3250	4 1/2 x 5	35x5 1/2	35x5 1/2	W
Atterbury, 7CX	1 1/2	3375	4 1/2 x 5 1/2	36x4	36x4d	W	Denby, 27	4	4200	4 1/2 x 5 1/2	36x5	36x5d	I	Hal Fur, B	2 1/2	3250	4 1/2 x 5	35x5 1/2	35x5 1/2	W
Atterbury, 7D	2 1/2	4175	4 1/2 x 5 1/2	36x5	40x5d	W	Denby, 210	5	4350	4 1/2 x 5 1/2	36x6	40x6d	I	Hal Fur, F	1 1/2	3250	4 1/2 x 5	35x5 1/2	35x5 1/2	W
Atterbury, 8E	5	5575	4 1/2 x 6	36x5	40x6d	W	Dependable, A	1 1/2	1630	3 1/2 x 5	34x5	34x5	W	Hall	1 1/2	3100	4 1/2 x 5 1/2	36x6 1/2	40x10 1/2	W
Autocar, 21UF	1 1/2-2	2100	4 1/2 x 5 1/2	34x4	34x5	D	Dependable, C	1 1/2	2350	3 1/2 x 5 1/2	34x3 1/2	34x5	W	Hall	2 1/2	3275	4 1/2 x 5 1/2	36x4	36x6	W
Autocar, 21UG	1 1/2-2	2100	4 1/2 x 5 1/2	34x4	34x5	D	Dependable, D	2	2650	4 x 5 1/2	36x5	36x6	W	Hall	2 1/2	4100	4 1/2 x 5 1/2	36x5	36x5d	W
Autocar, 26	1 1/2	4350	4 1/2 x 5 1/2	34x5	36x10	D	Dependable, E	2 1/2	2650	4 1/2 x 5 1/2	36x6	36x7	W	Hall	5	5100	4 1/2 x 6	36x5	40x6d	W
Autocar, 26-B	1 1/2	4500	4 1/2 x 5 1/2	34x5	36x10	D	Dependable, G	3 1/2	3350	4 1/2 x 6	36x6	36x7	W	Hall	5	5100	4 1/2 x 6	36x5	40x6d	W
Available, H1 1/2	1 1/2	2750	4 x 5 1/2	36x3 1/2	36x5	W	Diamond-T, O	1	2500	3 1/2 x 5 1/2	34x5 1/2	36x6 1/2	W	Hall	7	5100	4 1/2 x 6	36x5	40x6d	C
Available, H2 1/2	2 1/2	3175	4 x 5 1/2	36x4	36x8	W	Diamond-T, FS	1 1/2	2990	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Harvey, WEA	1 1/2	2550	4 1/2 x 5 1/2	34x3 1/2	34x5	W
Available, H3 1/2	3 1/2	4475	4 1/2 x 5 1/2	36x5	40x5d	W	Diamond-T, T	1 1/2	2610	3 1/2 x 5 1/2	36x4	36x7	W	Harvey, WFA	2 1/2	3300	4 1/2 x 5 1/2	36x4	36x7	W
Available, H5	5	5375	4 1/2 x 6	36x6	40x12	W	Diamond-T, U	2 1/2	3285	4 x 5 1/2	36x4	36x7	W	Harvey, WHA	3 1/2	4300	4 1/2 x 6	36x5	36x5d	W
Available, H7	7	6000	5 x 6	36x6	40x14	B	Diamond-T, K	3 1/2	4075	4 1/2 x 5 1/2	36x5	36x5d	W	Harvey, WKA	5	5200	4 1/2 x 6	36x6	40x6d	W
Avery	1	.....	3 x 4	34x5 1/2	34x5 1/2	I	Diamond-T, EL	5	5100	4 1/2 x 5 1/2	36x6	40x6d	W	Hawkeye, K	1 1/2	2365	3 1/2 x 5 1/2	34x3 1/2	34x5	I
Beck, A. Jr.	1	1800	3 1/2 x 5	34x3 1/2	34x4	I	Diamond-T, S	5	5610	4 1/2 x 6	36x6	40x6d	W	Hawkeye, M	2	2915	4 1/2 x 5 1/2	36x4	36x6	I
Beck, C	2	2550	4 1/2 x 5 1/2	36x4	36x6	I	Disch, B	1	.....	3 1/2 x 5	34x4 1/2	35x5	W							

Specifications of Current Motor Truck Models—Continued

NAME AND MODEL	Tons Capacity	Chassis Price	Base and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Base and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Base and Stroke	TIRES		Final Drive
				Front	Rear						Front	Rear						Front	Rear	
Kelly-S, K-45	4	\$4550	41x5 1/2	36x5	40x6d	C	Ogden, A1	1 1/2	\$2550	31x2 1/2	36x3 1/2	36x5	W	Service, 71	3 1/2	\$4285	41x5 1/2	36x5	38x5d	W
Kelly-S, K-50	5	4900	41x5 1/2	36x6	40x6d	C	Ogden, E	2 1/2	3250	41x5 1/2	36x4	36x7	W	Service, 76	3 1/2	4485	41x5 1/2	36x5	38x5d	W
Kelly-S, K-60	6	5100	41x5 1/2	36x6	40x7d	C	Old Hickory, W	1	2175	31x2 1/2	36x3 1/2	36x4	W	Service, 101	5	5275	41x5 1/2	36x6	40x6d	W
Keystone, 40	2	2450	34x5 1/2	34x5 1/2	38x7 1/2	I	Old Reliable, A	1 1/2	2350	4 x 35	34x4	36x6	W	Signal, NF	1 1/2	2475	41x5 1/2	34x5 1/2	38x6 1/2	W
Kimball, AB	2	3675	4 x 35	36x4	36x7	W	Old Reliable, B	2 1/2	3500	41x5 1/2	36x4	36x4d	W	Signal, H	1 1/2	2925	41x5 1/2	34x4	38x6	W
Kimball, AC	2 1/2	3975	41x5 1/2	36x4	36x8	W	Old Reliable, C	3 1/2	4250	41x5 1/2	36x5	36x5d	W	Signal, J	2 1/2	3275	41x5 1/2	34x4	38x8	W
Kimball, AK	3	4500	41x5 1/2	36x4	36x10	W	Old Reliable, D	5	5250	41x5 1/2	36x6	40x6d	W	Signal, M	3 1/2	4275	41x5 1/2	36x5	40x5d	W
Kimball, AE	4	5000	41x5 1/2	36x5	40x12	W	Old Reliable, KLM	7	6000	41x5 1/2	36x6	40x7d	C	Signal, R	5	5300	41x5 1/2	36x6	40x6d	W
Kimball, AF	5	5975	5 x 35	36x6	40x7d	W	Oldsmobile Econ.	1	1500	31x2 1/2	35x5 1/2	35x5 1/2	I	Southern, 10	1	2190	31x2 1/2	34x3 1/2	34x4	W
Kiesel, Express	1	1985 1/2	37 x 35 1/2	34x5 1/2	34x5 1/2	W	Olympic, A	2 1/2	3500	41x5 1/2	36x4	36x7	W	Southern, 15	1 1/2	2590	41x5 1/2	36x6 1/2	34x4	W
Kiesel, Utility	1 1/2	2775	37 x 35 1/2	36x3 1/2	36x5	W	Onida, A-9	1 1/2	2350	34x5 1/2	36x3 1/2	36x5	W	Southern, 20	2	2990	41x5 1/2	36x6 1/2	40x8	W
Kiesel, Freight	2 1/2	3475	41x5 1/2	36x4	36x7	W	Onida, B-9	1 1/2	2915	4 x 35 1/2	36x4	36x7	W	Standard, 1-K	1-1 1/2	1950	31x2 1/2	34x3 1/2	34x5	W
Kiesel, H. D.	4	4475	41x5 1/2	36x5	36x5d	W	Onida, C-9	2 1/2	3390	4 x 35 1/2	36x4	36x7	W	Standard, 76	2 1/2-3	3100	41x5 1/2	36x4	38x7	W
Kleiber, AA	1	2600	41x5 1/2	34x3 1/2	34x5	W	Onida, D-9	3 1/2	3445	41x5 1/2	36x5	36x10	W	Standard, 66	3 1/2-4	4000	41x5 1/2	36x5	38x10	W
Kleiber, A	1 1/2	3100	41x5 1/2	36x3 1/2	36x6	W	One da, E-9	5	5480	41x5 1/2	36x6	40x12	W	Standard, 5-K	5-6	5250	41x5 1/2	36x6	40x12	W
Kleiber, BB	2	3600	41x5 1/2	36x4	36x7	W	Orleans, A	1 1/2	2750	34x5 1/2	36x3 1/2	36x5	W	Sterling, 1 1/2	2	3200	4 x 35 1/2	36x3 1/2	36x5	W
Kleiber, B	2 1/2	4200	41x5 1/2	36x5	36x8	W	Orleans, B	2 1/2	3250	41x5 1/2	36x4	36x7	W	Sterling, 2	2 1/2	3500	4 x 35 1/2	36x4	36x5	W
Kleiber, C	3 1/2	4900	41x5 1/2	36x5	36x5d	W	Orleans, C	3 1/2	4250	41x5 1/2	36x5	36x8	W	Sterling, 2 1/2	3 1/2	3650	41x5 1/2	36x4	36x4d	W
Kleiber, D	5	5600	5 x 35 1/2	36x6	40x12	W	Orleans, D	5	5480	41x5 1/2	36x6	40x8	W	Sterling, 3 1/2	3 1/2	4650	41x5 1/2	36x5	40x5d	W
Koehler, D	1 1/2	3125	31x2 1/2	34x3 1/2	34x5	W	Oshkosh, A	2	3750	31x2 1/2	36x6	36x6	W	Sterling, 5-W	5	5500	5 x 35 1/2	36x6	40x6d	W
Koehler, M	2 1/2	3600	41x5 1/2	36x4	36x7	W	Oshkosh, AA	2	3850	31x2 1/2	36x6	36x6	W	Sterling, 5-C	5	6000	5 x 35 1/2	36x6	40x6d	C
Koehler, MCS	2 1/2	3600	41x5 1/2	36x4	36x7	W	Oshkosh, B	2 1/2	4150	4 x 35 1/2	36x7	38x7 1/2	W	Sterling, 7 1/2	7 1/2	6500	5 x 35 1/2	36x6	40x7d	C
Koehler, F	3 1/2	4125	41x5 1/2	36x5	36x10	W	Oshkosh, BB	2 1/2	4300	4 x 35 1/2	36x7	38x7 1/2	W	Stewart, 11	1 1/2	1350	31x2 1/2	32x4 1/2	32x4 1/2	I
Koehler, MT, Trac	2 1/2	3600	41x5 1/2	36x4	36x7	W	Packard, EC	2 1/2	3500	41x5 1/2	36x4	36x7	W	Stewart, 15	1 1/2	1875	31x2 1/2	35x5 1/2	35x5 1/2	I
L.M.C., 2-20	2 1/2	2540	41x5 1/2	36x4	36x4d	I	Packard, ED	2 1/2	4100	41x5 1/2	36x5	36x5d	W	Stewart, 19	2	2200	31x2 1/2	34x3 1/2	34x5	I
Lange, B	2 1/2	3350	41x5 1/2	36x4	36x8	C	Packard, EF	2 1/2	4500	5 x 35 1/2	36x6	40x6d	W	Stewart, 7	2 1/2	2500	41x5 1/2	36x4	34x7	I
Larrabee, J	2 1/2	2400	31x2 1/2	34x3 1/2	34x5	W	Packard, EX	2 1/2	4000	41x5 1/2	36x6	40x6d	W	Stewart, 7-X	2 1/2	2950	41x5 1/2	36x4	34x7	I
Larrabee, K	2 1/2	3400	41x5 1/2	36x4	36x7	W	Paige, 52-19	1 1/2	2850	4 x 35 1/2	34x3 1/2	34x6	W	Stewart, 10	3 1/2	3350	41x5 1/2	36x5	36x5d	I
Larrabee, L	2 1/2	4200	41x5 1/2	36x5	36x5d	W	Paige, 54-20	2 1/2	3400	41x5 1/2	36x4	34x6d	W	Stewart, 10-X	3 1/2	3850	41x5 1/2	36x5	36x5d	I
Larrabee, W	5	5100	41x5 1/2	36x6	40x6d	W	Paige, 51-18	3 1/2	4235	41x5 1/2	36x5	36x5d	W	Stoughton, A	1 1/2	1905	31x2 1/2	34x4 1/2	35x5 1/2	W
Lion, L	1	2350	31x2 1/2	35x5 1/2	35x5 1/2	W	Parker, F20	2	3500	4 x 35	34x4	36x4d	W	Stoughton, B	3 1/2	2350	31x2 1/2	36x5	36x5	W
Luedinghaus, C	1 1/2	2100	31x2 1/2	35x5 1/2	35x5 1/2	W	Parker, J20	5 1/2	4400	41x5 1/2	36x5	40x5d	W	Stoughton, D	2	2800	41x5 1/2	36x4	36x7	W
Luedinghaus, W	2 1/2	2700	31x2 1/2	34x3 1/2	34x5	W	Parker, M20	5	5500	41x5 1/2	36x6	40x6d	W	Stoughton, F	3	3000	41x5 1/2	36x5	36x5d	W
Luedinghaus, C	2 1/2	3150	41x5 1/2	36x4	36x7	W	Patriot, Rover	1 1/2	1755	31x2 1/2	35x5 1/2	35x5 1/2	W	Sullivan, E	2	3350	41x5 1/2	36x4	36x7	W
Maccar, L	2 1/2	2925	41x5 1/2	36x4	36x6	W	Patriot, Lincoln	1 1/2	2450	4 x 35 1/2	34x3 1/2	34x5	W	Sullivan, H	3 1/2	4650	41x5 1/2	36x5	36x5d	W
Maccar, H-2	2 1/2	3750	41x5 1/2	36x4	36x4d	W	Patriot, Wash'tn	2 1/2	3450	41x5 1/2	36x4	36x7	W	Superior, D	2	1850	31x2 1/2	34x4 1/2	34x4	I
Maccar, M-2	2 1/2	4500	41x5 1/2	36x5	36x5d	W	Piedmont, 4-30	1 1/2	1685	31x2 1/2	34x4 1/2	34x4 1/2	W	Superior, E	2	2800	41x5 1/2	36x4	36x6	I
Maccar, G	5	5500	41x5 1/2	36x5	40x6d	W	Pierce-Arrow	2	3750	4 x 35 1/2	36x4	36x4d	W	Super Truck, 50	2 1/2	3300	41x5 1/2	36x4	36x8	W
MacDonald, A	7 1/2	5750	41x5 1/2	40x7	40x14	I	Pierce-Arrow	3 1/2	4950	41x5 1/2	36x5	36x5d	W	Super Truck, 70	3 1/2	4300	41x5 1/2	36x5	40x5d	W
Mack, AB D.R.	1 1/2	3450	41x5 1/2	36x4	36x3 1/2d	C	Pioneer, 50	5	6700	41x5 1/2	36x5	40x6d	W	Super Truck, 100	5	5300	41x5 1/2	36x5	40x12	W
Mack, AB	1 1/2	3400	41x5 1/2	36x4	36x4d	I	Pittsburgher, B 21	2 1/2	3800	41x5 1/2	32x4 1/2	32x4 1/2	W	Super Truck 150	7 1/2	6100	5 x 35 1/2	36x6	40x7d	W
Mack, AB Chain	1 1/2	3000	41x5 1/2	36x4	36x3 1/2d	C	Pony	1 1/2	400	23x4 1/2	28x3 1/2	28x3 1/2	C	Texas, A38	1 1/2	1095	31x2 1/2	33x4	3x4	I
Mack, AB Chain	2	3750	41x5 1/2	36x4	36x4d	I	Power, F	1 1/2	2150	31x2 1/2	36x6	36x6	W	Tiffin, TK39	1 1/2	1550	31x2 1/2	36x6	36x7	W
Mack, AC Chain	3 1/2	4950	5 x 35 1/2	36x5	40x5d	C	Power, C	1 1/2	2150	31x2 1/2	36x6	36x6	W	Tiffin, GW	1 1/2	2095	41x5 1/2	36x3 1/2	36x5	W
Mack, AC Chain	5	5500	5 x 35 1/2	36x6	40x6d	C	Premcar, B-143	1 1/2	2475	31x2 1/2	36x6	36x6	W	Tiffin, MW	1 1/2	3580	41x5 1/2	36x4	36x3 1/2	W
Mack, AC Chain	6 1/2	5750	5 x 35 1/2	36x6	40x12	C	Rainier, R-11	1 1/2	2150	31x2 1/2	35x5 1/2	35x5 1/2	W	Tiffin, PW	3 1/2	4780	41x5 1/2	36x5	40x5d	W
Mack, AC Chain	7 1/2	6000	5 x 35 1/2	36x7	40x7d	C	Rainier, R-19	1 1/2	2350	31x2 1/2	34x3 1/2	31x4	W	Tiffin, F50	5	5850	41x5 1/2	36x6	40x6d	W
Mack Trac, AB	5	3400	41x5 1/2	36x4	36x4d	C	Rainier, R-16	1 1/2	2600	31x2 1/2	34									

Specifications of Current Motor Truck Models—Continued

NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	
				Front	Rear						Front	Rear						Front	Rear		
Ward-LaF., 5A	5	\$5590	5 x 6 1/2	36x6	36x6d	W	Wichita, O	3 1/2	\$4000	4 1/2 x 6	36x5	36x5d	W	Winther, 430	1 1/2	\$2850	3 1/2 x 5	32x4	32x4	I	
Watson, E	1	1865	3 1/2 x 5 1/2	34x4 1/2	34x4 1/2	W	Wichita, S	5	5000	4 1/2 x 6	36x6	40x6d	W	Winther, 39	1 1/2	2450	3 1/2 x 5	34x3 1/2	34x5	I	
Watson, N	1 1/2	4250	4 1/2 x 5 1/2	36x5	36x10	W	Wilcox, AA	1	2100	3 1/2 x 5 1/2	36x4	36x4	W	Winther, 49	2 1/2	3250	4 x 5	34x4	34x4d	I	
Western, W 1 1/2	1 1/2	2550	4 1/2 x 5 1/2	36x3 1/2	36x5	W	Wilcox, B	1 1/2	2775	4 1/2 x 5	36x4	36x5	W	Winther, 70	3 1/2	4200	4 x 6	36x5	36x5 1/2	I	
Western, L 1 1/2	1 1/2	2550	4 1/2 x 5 1/2	36x3 1/2	36x5	W	Wilcox, D	2 1/2	3300	4 1/2 x 5	36x4	36x5 1/2	W	Winther, 450	4	3600	4 x 5	34x5	36x6	I	
Western, W 2 1/2	2 1/2	3250	4 1/2 x 5 1/2	36x4	36x7	W	Wilcox, E	3 1/2	4250	4 1/2 x 6	36x5	36x5d	W	Winther, 100	5	5250	4 1/2 x 6	36x6	40x5d	I	
Western, L 2 1/2	2 1/2	3250	4 1/2 x 5 1/2	36x4	36x7	W	Wilcox, F	5	5200	4 1/2 x 6 1/2	36x5	40x6d	W	Winther, 140	7	5000	5 x 6	36x6	40x7d	I	
Western, W 3 1/2	3 1/2	4250	4 1/2 x 5 1/2	36x5	40x5d	W	Wilson, E	1 1/2	2270	3 1/2 x 5	36x3 1/2	36x5	W	Wisconsin B	1	1950	4 x 5 1/2	34x5 1/2	34x5 1/2	W	
White, 15	2	2400	3 1/2 x 5 1/2	34x5 1/2	34x5 1/2	B	Wilson, EA	2 1/2	2825	4 1/2 x 5 1/2	36x4	36x7	W	Wisconsin C	1 1/2	2250	4 1/2 x 5 1/2	34x5 1/2	36x6 1/2	W	
White, 20	2	3250	3 1/2 x 5 1/2	36x4	36x7	D	Wilson, G	3 1/2	3685	4 1/2 x 5 1/2	36x5	36x5d	W	Wisconsin D	2 1/2	3500	4 1/2 x 5 1/2	36x6	36x10	W	
White, 40	3 1/2	4200	3 1/2 x 5 1/2	36x5	40x5d	D	Wilson, H	5	4520	4 1/2 x 6	36x6	40x6d	W	Wisconsin E	3 1/2	4000	5 x 6 1/2	36x6 1/2	36x12 1/2	W	
White, 45	5	4500	4 1/2 x 5 1/2	36x6	40x6d	D	Winther, 751	3 1/2	1795	3 1/2 x 5	34x4 1/2	35x5 1/2	I	Witt-Will, N	1 1/2	2750	3 1/2 x 5	36x3 1/2	36x5	W	
White Hick., E	1	2450	3 1/2 x 5 1/2	34x5 1/2	34x5 1/2	W	*2-cyl. †6-cyl. †8-cyl. All others, not marked, are 4-cyl. Trac., Tractor. **Canadian made.														
White Hick., H	1 1/2	2750	3 1/2 x 5 1/2	36x4	36x5	W	Final Drive: W—Worm, I—Internal Gear.														
White Hick., K	2 1/2	3350	4 1/2 x 5 1/2	36x4	36x5	W	C—Chains, D—Double Reduction, B—Bevel, I—Four-Wheel, E—External Gear. *Tires—optional.														
Wichita, K	1	2300	3 1/2 x 5 1/2	36x3 1/2	36x4	W	†Pneumatic Tires. All others solid. ††—Price includes body. ‡—Price includes several items of equipment.														
Wichita, L	1 1/2	2600	3 1/2 x 5 1/2	36x3 1/2	36x5	W															
Wichita, M	2	2800	3 1/2 x 5 1/2	36x3 1/2	36x6	W															
Wichita, R	2 1/2	3000	3 1/2 x 5 1/2	36x4	36x7	W															
Wichita, RX	2 1/2	3600	4 1/2 x 6	36x4	36x8	W															

Farm Tractor Specifications and Prices

TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Pump Capacity	TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Pump Capacity	TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Pump Capacity
All-In One	16-30	\$1075	3	Clim.	4-5 x 6 1/2	GDK	3-4	Gray, 1920	18-36	\$2000	3	Wauk	4-4 1/2 x 6 1/2	Gas.	4	Port Huron, A	12-25	\$1700	4	Chief	4-4 1/2 x 6	G.K	3
Allis-Chalm.	6-12	925	2	LeR.	4-3 1/2 x 4 1/2	Gas.	1	Ground Hog	19-31	2000	4	Erd.	4-4 x 6	GorK	4	Post	12-20	1800	4	Wauk	4-4 1/2 x 5 1/2	GorK	2
Allis-Chal. G.P.	6-12	850	2	LeR.	4-3 1/2 x 4 1/2	Gas.	1-2	Gr. Western St	20-30	1950	4	Beav.	4-4 x 6	K.	4	Prairie Dog, L	9-18	650	3	Wauk	4-3 1/2 x 5 1/2	Gas.	2
Allis-Chalm.	12-20	1495	2	Mid. W	4-4 1/2 x 5 1/2	Gas.	2-3									Prairie Dog, D	15-30	1250	4	Wauk	4-4 1/2 x 6 1/2	Gas.	3
Allis-Chalm.	18-20	2150	4	Own	4-4 1/2 x 6 1/2	GorK	3-4	Hart-Parr, 20	20	995	4	Own	2-5 1/2 x 6 1/2	K.D	3	Ranger Cul	8-16		4	LeR.	4-3 1/2 x 4 1/2	Gas.	1
Allis-Chalm.	10-18	875	4	Own	4-4 1/2 x 6 1/2	GorK	4	Hart-Parr, 30	30	1595	4	Own	2-6 1/2 x 7	K.D	3	T-20				Dom	4-4 1/2 x 5 1/2	K.	3-4
Allwork, 2-G	14-28	1875	4	Own	4-4 1/2 x 6	GorK	3	Heider, D	9-16	1170	4	Wauk	4-4 1/2 x 5 1/2	G.K	2	Reed	15-30	2250	4	Dom	4-5 x 6	Gas.	4
Allwork, C	14-28	1675	4	Own	4-5 x 6	GorK	3	Heider, C	12-20	1395	4	Wauk	4-4 1/2 x 6 1/2	G.K	3	Reed, A-1	18-36	2400	4	Dom	4-5 x 6	Gas.	4
Andrews, K.D.	18-36	2500	4	Clim.	4-5 x 6 1/2	GorK	4	Heider, Cult	6-10	1050	4	LeR.	4-8 1/2 x 4 1/2	Gas.	1	Rel.	10-20	985	4	Own	2-6 x 7	Ker.	3
Appleton	12-20	1500	4	Buda	4-4 1/2 x 5 1/2	G.K	2-3	Hicks	20-30		4	Wauk	4-4 1/2 x 6	GorK	3	Reliable	12-25	1600	4	Wauk	4-4 1/2 x 5 1/2	GorK	3
Are, 1921	3-5	550	4	Own	1-4 1/2 x 5	G.K	1	Huber Light 4	12-25	1185	4	Wauk	4-4 1/2 x 5 1/2	GorK	3	Russell	12-24	1500	4	Own	4-4 1/2 x 5 1/2	GorK	2-3
Aultman-T.	15-30	2200	4	Clim.	4-5 x 6 1/2	G.K	4	Huber Super 4	16-30	1885	4	Midw.	4-4 1/2 x 6	Gas.	3	Russell	15-30	2200	4	Own	4-5 x 6 1/2	GorK	3-4
Aultman-T.	22-45	3850	4	Own	4-5 1/2 x 8	G.K	6									Russell	20-35	3000	4	Own	4-5 1/2 x 7	GorK	4-5
Aultman-T.	30-60	5000	4	Own	4-7 x 9	G.K, D	8	Illinois, Super	18-36	2500	4	Clim.	4-5 x 6 1/2	G.K	4	Russell	30-60	5000	4	Own	4-8 x 10	GorK	8-10
Automot. B-3.	12-24	1785	4	Herc.	4-4 x 5 1/2	Gas.	2-3	Drive	40-70	5000	4	Own	4-7 1/2 x 9	G.K, D	10	Samson, M		995	4	Nov.	4-4 x 5 1/2	G.K	2
Avery, SR, Cult-C	5-10		4	Own	4-3 x 4	G.K		Imperial, E	8-10		2	LeR.	4-3 1/2 x 4 1/2	Gas.	1-2	Sandusky, J	10-20	1250	4	Own	4-4 1/2 x 5 1/2	G.K, D	2
Avery, Cult-C	5-10		3	Own	4-3 x 4	G.K	2	Indiana, F	8-16	1000	4	Own	4-4 1/2 x 5	G.K, D	2	Sandusky, E	15-35	1750	4	Own	4-5 x 6 1/2	G.K, D	4
Avery, B	5-10		4	Own	4-3 x 4	G.K		International.	15-30	1950	4	Own	4-5 1/2 x 8	G.K, D	4	Shawnee Com	6-12		2	LeR.	4-3 1/2 x 4 1/2	Gas.	10
Avery, C	8-16		4	Own	2-6 1/2 x 6	G.K, D	2-3									Shawnee Com	9-18		2	Gray	4-3 1/2 x 5	G.K	3
Avery, C	12-20		4	Own	4-4 1/2 x 6	G.K, D	2-3	J-T, N	20-40	3485	2	Chief	4-4 1/2 x 6	G.K, D	3-4	Shelby, C	15-30		4	Beav.	4-4 1/2 x 6	G.K	3
Avery, C	12-25		4	Own	2-6 1/2 x 7	G.K, D	3-4	Klumb	16-32	1650	4	Clim.	4-5 x 6 1/2	Gas.	4-6	Shelby, C	10-20		4	Erd.	4-4 x 6	GorK	2-3
Avery, C	14-28		4	Own	4-4 1/2 x 7	G.K, D	3-4	Knudsen, 1920	25-45	2500	4	Own	4-5 x 9	Gas.	4-6	Short Turn	20-40	1500	3	Beav.	4-4 1/2 x 6	G.K	3
Avery, C	18-36		4	Own	4-5 1/2 x 6	G.K, D	4-5									Square 1	18-35	2075	3	Clim.	4-5 x 6 1/2	G.K	3
Avery, C	25-50		4	Own	4-6 1/2 x 7	G.H, D	5-6	LaCrosse, M	6-12	900	4	Own	2-4 x 6	G.K	1	Steady Pull	12-24	1485	4	Beav.	4-4 x 5	G.K	3
Avery, C	45-65		4	Own	4-7 1/2 x 8	G.K, D	8-10	LaCrosse, G	12-24	1250	4	Own	2-6 x 7	GorK	3	Stinson, 4E	18-36	1835	4	Beav.	4-4 1/2 x 6	G.K	4
Bates	15-25		4	Own	4-4 1/2 x 6	Ker.	3	Lauson	12-25	1495	4	Midw.	4-4 1/2 x 5 1/2	Gas.	3	Stone	20-40	2250	4	Beav.	4-4 1/2 x 6	G.K	4
Bates Mule, H	15-25		4	Midw	4-4 1/2 x 5 1/2	Gas.	3	Lauson	15-25	1685	4	Beav.	4-4 1/2 x 6	GorK	3-4					Wisc.	4-4 1/2 x 6	Gas.	3-4
Bates Mule, F	18-25		2	Midw	4-4 1/2 x 6	Gas.	3	Lauson, 21	15-30	1985	4	Beav.	4-4 1/2 x 6	GorK	3-4	Tioga, 3	15-27	2625	4	Own	2-6 1/2 x 8	G.K, D	3
Bates Mule, G	25-35		2	Midw	4-4 1/2 x 6	Gas.	com.	Leader, B	12-18	1095	4	Own	2-6 x 6 1/2	G.K, D	2-3	Titan	10-20	1000	4	Wauk	4-4 1/2 x 6 1/2	Gas.	3-4
Beane	8-16		1	Own	1-3 1/2 x 4 1/2	G.K	2-3	Leader, N	16-32	1985	4	Clim.	4-5 x 6 1/2	G.K	3-4	Topp	30-45	3500	3	Wauk	4-4 1/2 x 6 1/2	Gas.	3-4
Beeman, G	2-4	315	4	Own	1-3 1/2 x 4 1/2	G.K	1/2	Leader, GU	18-35	2775	2	Clim.	4-5 x 6 1/2	G.K	3-4	Town, Cultivator	6-10		3	LeR.	4-3 1/2 x 4 1/2	Gas.	2
Best	30		2	Own	4-4 1/2 x 6 1/2	G.K, D	5-9	Leonard, E	20-30	2530	4	Buda	4-4 1/2 x 6	G.K	3	Townsend	10-20	1200	2	Own	4-6 1/2 x 7	Ker	2-3
Best	60		2	Own	4-4 1/2 x 6 1/2	G.K, D	5-9	Liberty, A	18-32	2475	4	Clim.	4-5 x 6 1/2	G.K	4	Townsend	15-30	1800	2	Own	4-7 x 8	Ker	3-4
Boring, 1921	30	1850	3	Wauk	4-6 1/2 x 7	GorK	2	Linn, H4J	40-45	4500	4	Cont.	4-4 1/2 x 5 1/2	Gas.	4	Townsend	25-50	3000	2	Own	4-8 1/2 x 10	Ker	4-8
Burn-Oil, 1921	15-30	1650	4	Own	2-6 1/2 x 7	Ker.	3-4	Linn, W	60	5100	4	Wauk	4-5 x 6 1/2	Gas.	6	Traction Motor	40-50		4	LeR.	8-3 1/2 x 5	Gas.	4-5
Capital	15-30	1009	2	Own	4-4 1/2 x 6	Gas.	3	Little Giant, B	16-22	2200	4	Own	4-4 1/2 x 5	K.	4	Traylor, TB	6-12	715	4	LeR.	4-3 1/2 x 4 1/2	Gas.	4
Case	10-18	1090	4	Own	4-3 1/2 x 5	GorK	2	Little Giant, A	25-35	3300	4	Own	4-5 1/2 x 6	K.	6	Triumph, H	18-36	2450	4	Erd.	4-4 1/2 x 6	Ker.	4
Case	15-27	1680	4	Own	4-4 1/2 x 6	GorK	3	Lombard	85-155	</td>													

MOTOR WORLD

for
DEALERS, JOBBERS AND GARAGEMEN

Vol. LXVIII

New York, U. S. A., Wednesday, July 27, 1921

No. 4

My, What a Difference!



Is the automobile section of the newspaper you use made attractive with real, live news, or does it still cling to the old style?

How to

Help the Newspapers Make More Motor Car Purchasers

A Story That Tells What the Dealer Can Do to Increase the Effectiveness of His Advertising by Helping to Get More Real Automotive News

THE pulling power of an automobile dealer's advertisement in a local newspaper depends, in a large measure, upon the quality of the audience it secures—the number of really interested persons who read that part of the newspaper in which it is printed.

Whether automobile advertising attains its maximum effectiveness often depends upon whether the particular newspaper in which it appears makes a strong appeal to motorists—whether it has a GOOD automobile section.

Therefore, is it not reasonable to assume that it is the particular job of the automotive dealer to see to it that the local newspapers in which his advertising appears have the kind of automobile sections that secure for his advertisements at all times a large and desirable audience?

THE fact that the newspapers of some cities do not contain real, live interesting automobile sections—the kind that make people turn to them to get the motor news and read the dealers' advertisements in them—is, perhaps, more the fault of the dealers than the fault of the publishers.

Although the average layman regards the newspaper in somewhat the light of a person who collects news by the use of some crystal-gazing process, a newspaper organization, as a matter of fact, is just a hard headed business group collecting news and selling it to the public. The number of people and the purchasing power of the people who purchase the news determines the value to the dealer of the white space that the newspaper sells him for his story—his advertising—**HIS PARTICULAR NEWS**.

Most newspapers buy thousands of dollars worth of news every year and pay thousands more in salaries to trained news gatherers. No newspaper refuses to print real news—news that is interesting to readers, authentic, dependable. And dealers can help make the newspapers that carry their advertising interesting to motorists and to the general public by supplying them with the actual news of the industry in their cities, and in the state and the nation as well.

Many a dealer's first experience in trying to supply "news" to his local newspaper has been so disappointing that he has quit cold with some modification of the idea that the editor doesn't know news or doesn't want to print it. If a question arises as to whether an item submitted is printable news, it's wise to take the word of the editor—he knows

best. That's what he is paid for. His business is knowing what is news and printing only that.

When such a question arises, it is a good idea to talk things over with the editor. Catch him at a time when he is not "rushing to press" and get his views on what real motor car news is. Then, keep this in mind when preparing the story. The dealer should put himself in the editor's chair, remember that the whole world is bidding for the three or four hundred inches of column space that the editor fills every day. His job is one of elimination. The dealer's story will have to **SELL ITSELF** in competition with this world-wide field to get into print.

This suggests the question, "What is news?" People have written books on the subject—you'll find lots of them in your public library. But, this one little sentence probably summarizes all that ever has been written on the subject: "News is something that one man stops another on the street to tell."

If the information contained in the story that the dealer sends to his newspaper with a request for publication hasn't sufficient effect upon him to make him want to tell it to his fellow-dealers and particularly to his motorist friends, he can be reasonably certain that it isn't going to recommend itself very strongly to the editor.

Many newspapers charge higher rates for special advertising positions, such as sporting page and editorial page. The reason for this is that it is reasonable to assume that more people turn to these two pages and find something interesting than to any of the other pages where ad-

vertising space may be purchased. Some dealers realize this, and more should, that it is within their power to make the automobile sections of newspapers interesting to a greater number of people by helping to supply those sections with automobile news that will be interesting to the greatest number of motorists. The kind of reading matter that will make the reader want to look up from his paper and say "I see in *The Press* that"—. The more interested readers that are drawn to the automobile section the greater the audience and consequently the greater the effectiveness of the advertising it contains.

The day is fast passing when newspapers worth advertising in will print the ordinary line of bombastic "bunk" just to get a few inches of paid advertising. Long before newspapers started throwing this stuff in the waste basket it acquired the name of those who handled it of "bunk." You remember the stuff well, it came in sheaves from the factory, all neatly typewritten, and bursting with superlatives in describing the products of the factory or personal attainments of some official. Very often it was a discussion of, "Why Every Other Car on Earth Should Climb a Telegraph Pole and Hang Itself," or something that inferred the same—and there was a nice dotted line to insert the dealer's name, just to give it local color. But those old days of "canned bunk" are going.

Some real progressive newspapers are refusing to adulterate the pulling power of their automobile sections by surrounding the advertising in them with that stuff—and more are going to in the

future. If the newspapers you advertise in are still using "bunk" to fill up between your advertisement and that of some other dealer, it probably is because you and other dealers are supplying the editor with "bunk" instead of news. It is, probably, that because you have handed this stuff to the advertising solicitor he has, often with much difficulty, sold the editor on the idea that this is what you want and it gets into the paper against the better judgment of the editor or publisher because he THINKS you want it.

But you don't want it, and the way to sell the newspaper on the fact that you don't want it, is to supply the newspaper with what you DO want — interesting news of the industry abroad and at home that will make the kind of people that you want to sell cars to, want to read the automobile section.

By taking the trouble to write to the editor telling him about real news development in your industry, you can prove to him that there is news along the automobile row. Publishing a newspaper is a business proposition, and when you have sold the publisher on the fact that motor row is a real news source through these contributions, it won't be difficult to get him to assign a trained news gatherer to "cover" the row. When you have accomplished this, you have laid the foundation for the kind of an automobile section in your local paper that will give your advertising many times more effectiveness. But the dealer's responsibility doesn't end here. He must continually supply the reporter with the information or the "tips" leading to real automobile news.

When the trained news gatherer calls tell him everything you think is interesting, then watch how much of what you told him appears in the paper. Most of what actually appears will be the real news. You can depend on that. So, by observation you can train yourself to know what is news and what is not.

The fact is pretty well established that newspapers having the circulation of 10,000 or more can make the automobile department a highly profitable venture, if it is conducted along proper lines. The automobile department that is a real asset to the newspaper and to the dealer advertisers is the one that gives the newspaper a motor interest that is really local. John Doe of Kalamazoo is not interested in the fact that some dealer out in Seattle drove his Royal Four to the top of Mount Whateveritis in 44 minutes.

But John Doe of Kalamazoo is interested in the fact that the Kalamazoo Motor Club is going to co-operate with other civic associations in an effort to secure a bond issue for the construction of good roads in that county and John's friends will be interested too, and nearly

everybody, in fact, who happens to read the item. This represents the primary difference between what is termed "bunk" or canned publicity and that type that carries an interest that is really local.

From this it should not be gathered that an automobile department must be entirely local to be effective. It should contain enough local news to make its subscribers turn to the automobile section to learn what is happening in local automobile circles, but it also should give them some of the broader developments of the industry that affect the whole country.

This suggests the question: "What is

To Whom Does Your Ad Talk?

IS your newspaper advertising getting home? Is it reaching an interested, sympathetic audience.

Whether it is depends, to some extent, upon the strength of the appeal the newspapers you use make to motorists—on the quality of the automobile section.

Dealers CAN help to make the newspapers they advertise in particularly interesting to the people to whom they direct their advertising—THIS STORY TELLS HOW.

It suggests a means of getting rid of the "bunk" and "canned publicity" that litter the automobile sections of many newspapers and adulterate the pulling power of the automotive advertising they carry.

It contains a thought worth remembering when you plan your fall advertising and publicity campaign.

Why not read it NOW?

good local automotive news?"

No attempt is made here to enumerate ALL of the things that may be regarded as good local news items for an automobile section, but sufficient is given to indicate what is acceptable news for the ordinary good automobile section.

The subjects are classified according to the sources from which they may be expected to spring. They are:

The State

- 1—Incorporations of new manufacturing, sales, service and repair businesses.
- 2—New laws affecting the motorist.
- 3—Rules of the motor vehicle department concerning licenses, application of laws, issuance of drivers' licenses, registration, etc.
- 4—Condition of state roads, improvements, appropriations for new roads, detours on state controlled roads due to repairs, wash-outs, etc.

The County

- 1—Appropriations of county governing body for road improvement.
- 2—Road repairs, new roads, condition of county roads, detours, etc.
- 3—Snow removal plans, motorization of equipment, etc.
- 4—Local incorporations of sales and service businesses.

The City

- 1—Changes in traffic rules, parking places.
- 2—Plans for street improvements, streets

closed for repairs, oiling, preparations for snow removal, motorization of street department.

3—Filing of plans for erection and renovation of automotive buildings, descriptions, etc.

4—Apprehension and conviction of automobile thieves, penalties imposed.

General

1—Special tours to local points of interest with maps showing route and description of road conditions, interesting historical and beauty spots along the way.

2—Personals, telling of changes in the organizations of automotive businesses, promotions, etc.

3—Changes of business addresses.

4—Stories of activities of local dealers' association and local automobile club in protecting the interests of motorists in state legislature and before county and city governing bodies.

5—Stories of social activities of automotive business men of the city, including banquets, dinners, picnics of associations and individual organizations.

6—Plans of dealers for shows and demonstrations by associations and by individual dealers.

7—Activities of dealers, garagemen, etc., in participating in the promotion of local civic enterprises.

All of these items, and many more, originate within a zone surrounding most cities that may be regarded as "local," and while, of course, stories under these headings will not appear every day, or every week, they will develop from time to time and contact with the sources will assure the publication of them when they do occur.

In this article no mention has been made of the wide field of news sources from which spring items of more or less sectional or national interest. Most newspapers are served by national news gathering enterprises, like the Associated Press, which supply these, and by national organizations which are continually bombarding newspaper offices with their publicity, some of which is mighty interesting to all motorists. The dealer often may supplement these with stories of a national scope which appear in the issues of his trade papers.

While the well edited and well balanced automobile section should contain enough of this national news to keep the motorist informed concerning the larger movements in the industry that directly affect him, it should be kept in mind that the section must have a strong local flavor if it is to attract the largest percentage of its motorist readers.

Car owners form a big proportion of the subscribers of all newspapers these days and they are entitled to the news of the industry.

All of which suggests the inquiry: Are YOU helping to make the newspaper you advertise in MORE INTERESTING TO MOTORISTS AND TO THOSE WHO SOME DAY WILL BE MOTORISTS, and thus contributing to the pulling power of your advertising?

The Motor Truck Is a Utility— Sell It as Such

This Story Tells How a Dealer Can Analyze One Important Phase of Truck Installation for His Customer—It Helps Him to Sell Truck Transportation, Which Means Truck Satisfaction

L OADING and unloading time is an important factor in the capacity of a motor truck installation. Its importance is pretty generally understood and much time and effort is being spent in the development of ways and means of reducing this element.

In approaching a problem to determine whether motor trucks can be used to advantage in a given transportation problem or to study means for increasing the efficiency of a motor truck installation, it is customary to investigate the loading and unloading conditions, nature and distance of routes traveled, and other important facts affecting the operation of the truck, in order to draw up a report covering the capacity of a given truck under these conditions. In addition all costs are investigated and the cost per ton-mile is usually estimated.

W HEN horses were depended upon for haulage, the importance of loading and unloading time was not so prominent because their daily mileage was limited. But in the case of a motor truck, the mileage is only limited by the number of hours that the truck is on the road. It is obvious that the greater the number of actual running hours the less will be the cost of transporting a unit, for the reason that the overhead expense will be distributed over a greater number of ton-miles.

In calculating the working capacity of a truck, the first step is to determine the round trip length of the haul. The next step is to find the total time per trip spent in loading and unloading. With these two figures, assuming a ten hour day, it is simply necessary to determine the average operating speed in miles per hour to find the number of trips per day and the daily ton-mile capacity.

Experience shows that the average speed is considerably below the governed speed of the truck. Traffic delays, grades and turns all help to increase the running time. In view of the foregoing it is fair to assume that the average speed will be 75 per cent of the governed speed.

The following formula, in which T is the total time per round trip in minutes, L is the total time per trip for loading and unloading, D is the round trip distance of the trip in

What This Story Says:

H OW much will it cost to operate that truck in my business? Ever had a prospect floor you with that inquiry?

This story was written to help truck dealers answer the question intelligently. It was written with the idea of presenting to the trade a simple, practical method of determining the size of truck a prospect can use most economically and what it should cost to operate that truck in the prospect's particular business.

It tells how to calculate the working capacity of any truck—how to compute the ton mile capacity under any conditions.

IT MAY HELP YOU SELL A TRUCK TO-MORROW—READ IT TO-DAY.

miles, and S is the average speed of the truck, gives a value for T :

$$T = L + \frac{60 D}{S}$$

An example will best explain the use of this formula. Suppose that the loading and unloading time, L , is 30 minutes, the round trip distance 4 miles, and the average speed 10 miles per hour.

$$T = 30 + \frac{60 \times 4}{10} = 30 + 24 = 54 \text{ min.}$$

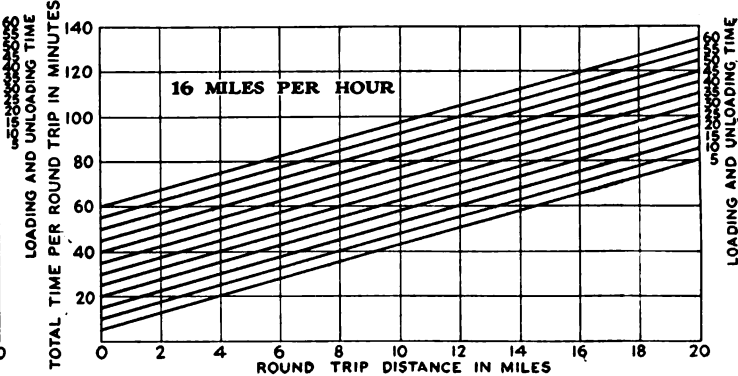
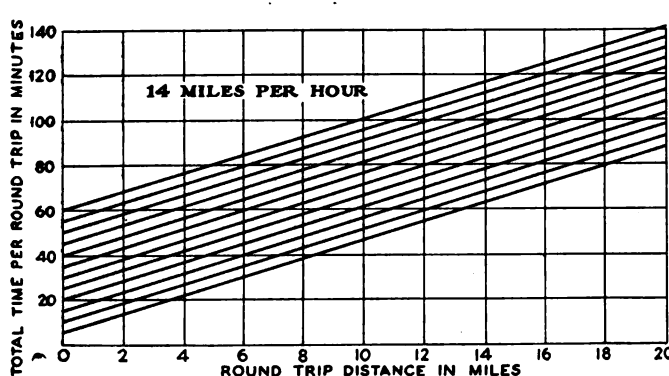
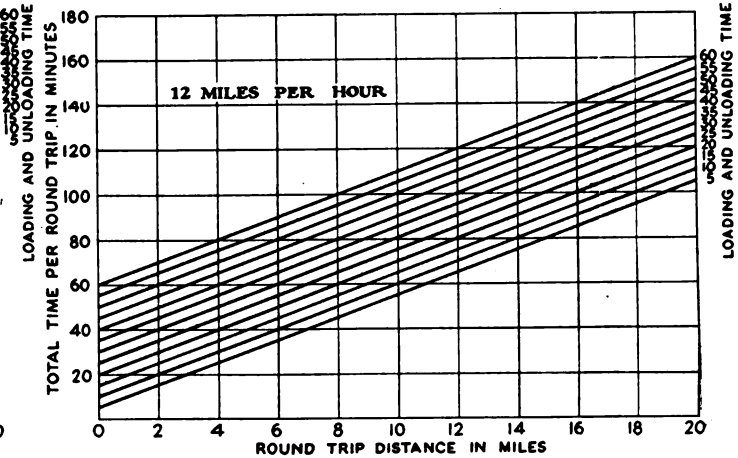
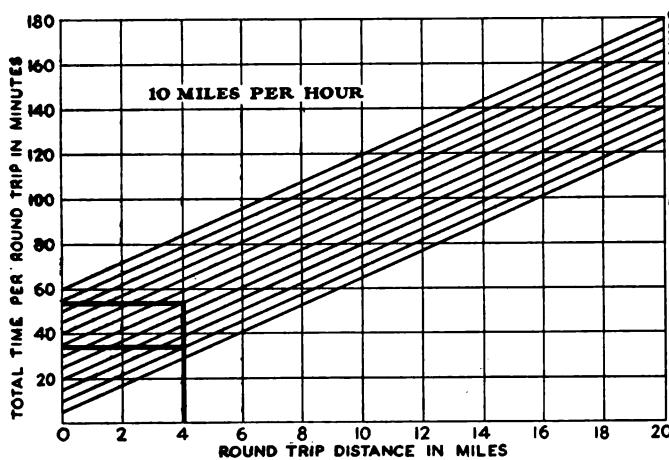
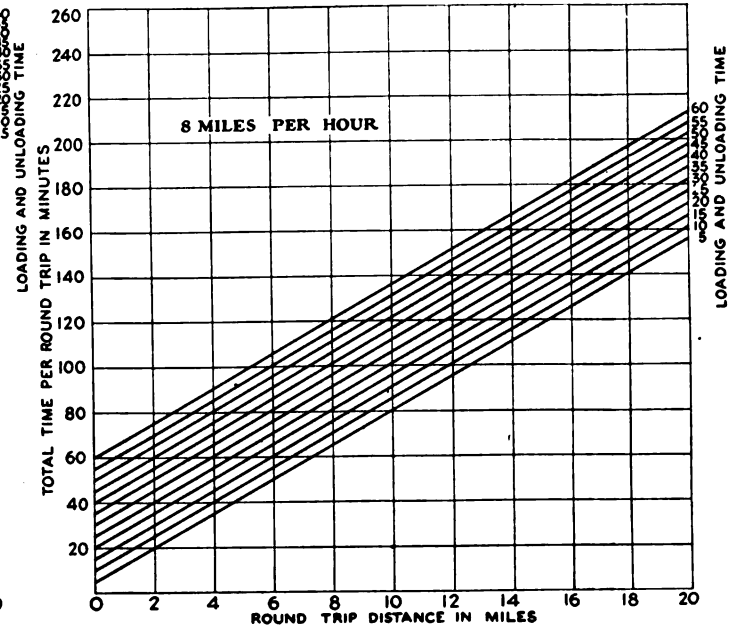
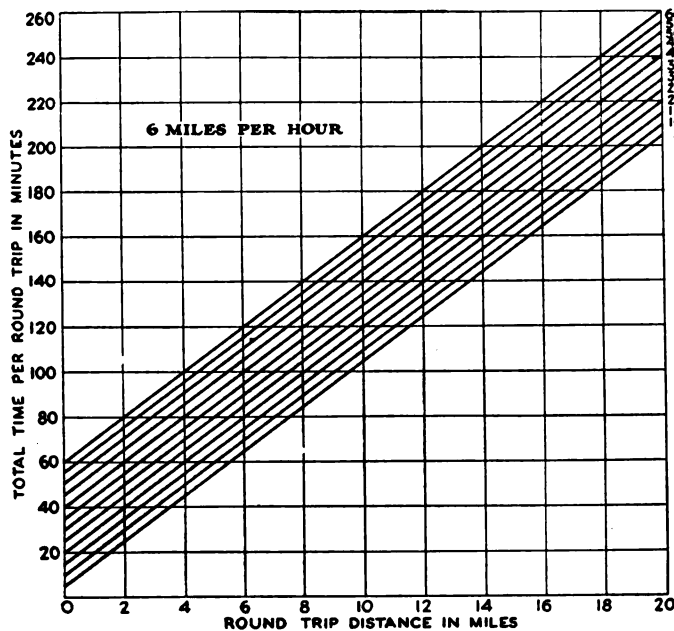
The speed, S , is assumed to be 75 per

per cent of the governed speed, which in this case would be $13\frac{1}{2}$ miles per hour. This truck operating under these conditions would be able to make eleven trips per day. To determine the daily tonnage hauled it is simply necessary to multiply the number of tons per load by the number of trips.

The curves on the opposite page make the determination of the total time per trip a very simple matter. A set of curves is given for each of the following assumed average speeds: 6, 8, 10, 12, 14 and 16 miles per hour. Each set of curves covers round trips of from 0 to 10 miles and loading and unloading times of from 5 to 60 minutes in steps of five minutes.

The solution of the problem given above by means of these curves is as follows: The average speed is 10 miles per hour, so the No. 3 set of curves is used. Starting at 4 on the horizontal scale, go vertically up until the diagonal loading and unloading time line marked 30 is reached. Then pass horizontally to the scale at the left. The total time per trip is found to be 54 minutes.

Continuing the investigation, it is clear that of the 54 minutes required for a round trip but 24 minutes are spent on the road, because 30 minutes are required for loading and unloading. In other words, the truck is idle about 56 per cent of the time. If the condition could be changed so that the loading and unloading time would be



These charts give the round trip time for trucks operating at various speeds and for loading and unloading times of from five to sixty minutes. The use of these charts is illustrated on the one drawn for an average speed of ten miles per hour. Suppose the round trip distance is four miles, and the loading and unloading time ten minutes, then total time is thirty-four minutes, but if the loading and unloading time is increased to thirty minutes the total time is fifty-four minutes. Charts of this type were first designed by Francis W. Davis of the Pierce-Arrow Motor Car Co.

reduced to 10 minutes, the time required for a round trip would be cut to 34 minutes, and the idle time reduced to about 30 per cent. The number of trips per day are increased from 11 to 18. This results in a daily increase of tonnage of about 64 per cent. To make the importance of this reduction in loading and unloading time

clear, two trucks haul more tons under these conditions when the loading and unloading time is 10 minutes than three trucks do when the loading and unloading time is 30 minutes.

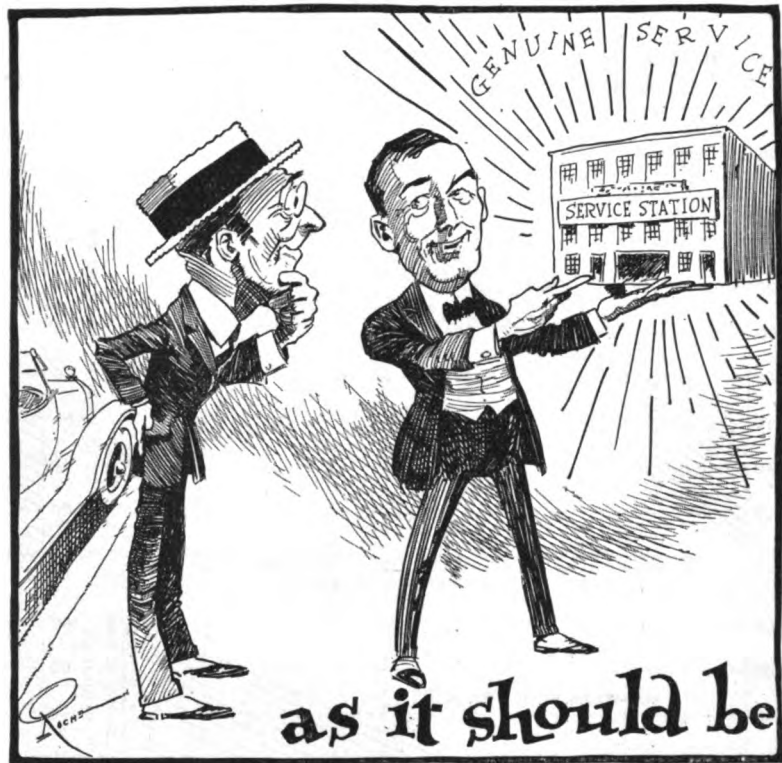
The reduction of loading and unloading time is of greatest importance on a short haul job, because on this class of work the truck must be loaded

and unloaded frequently. This factor is of such importance in the eyes of some that they do not consider the truck adapted to short hauls. This is a fallacy. If the conditions are right as respect loading and unloading, it is usually possible to show the motor truck in a favorable light even under these unfavorable conditions.

"Let Me Show You Our Service Station"

A Car Owner Claims This Is a Boast Few Dealers Can Make, and Shows Why the Service Problem Should Be Made an Asset—The Owner's Slant on the Sort of Service Customers Want But Don't Get, and Why They Don't Get It

By FREDERICK C. RUSSELL



SINCE the day the first privately owned motor car went back to the dealer for repairs and adjustments certain of the motoring public have been more or less openly at war with the service end of the dealer's business. Motorists—many of them—can narrate incident after incident to prove that service stations have

not been and, for the most part, are not being conducted either in the interests of the dealers or their customers. Even in this day and age when service stations are being carefully combed of their many tangles it is common to hear dealers confess, "I'd be a happy man if I could drop the service end of the business."

THIS I believe is typical of the passenger car dealer's attitude. Whether he expresses it openly or works himself into a condition of suppressed nervous prostration he has consistently regarded service as the fly in the ointment. I have gone car shopping a great many times in the years that I have been motoring but I have yet to hear a dealer or his salesman say, "Let me show you our service station." Something tells him that some other motorist has already warned the prospect not to buy the particular make of car because of the unsatisfactory service that goes with it. Worst of all, the dealer knows that the warning is well founded. He has nothing new to offer by way of service, so he evades the issue altogether, knowing that in the course of motoring events the customer will stub his toe on the awful truth, and hoping in vain that the discovery will be postponed as long as possible.

If this isn't the general attitude then I should like to know why so many car owners fail to take action when others suggest, "Why don't you take the car to your service station and have it fixed?" If dealers aren't evading the issue why are so many car owners deserting old favorites and trying new makes of cars? If the dealers aren't reluctant to iron out the service problems why are car

owners still holding up their service stations to ridicule?

From my experience as an insurance loss adjuster and more directly perhaps through my contact with the situation as a motorist I have reached the conclusion that dealers must either concentrate on service or fail in the attempt to properly represent the manufacturers. If a car were a commodity which could be sold and subsequently consumed without need of care or adjustment a dealer would be wholly justified in concentrating on selling and could regard his function of serving as complete when once he had exchanged a legitimate article for cash.

But the thing that really counts in selling cars—particularly for resales—is the service the dealer sells with them. Why, then, evade the issue? Why regard the service station as a "side line"? It is the bulwark of the business—the footrule by which the car and its organization are judged.

Hundreds of dealers have fought shy of this fact so persistently that they have long since slipped from the ranks. Thousands are just now on the edge, but are still choosing to soft pedal their service stations as though they regarded them as necessary evils and were ashamed of the fact. When I want to have my car looked over I am obliged to drive it

down a filthy alley. One has to be a rather skillful operator to handle a car in such close quarters, and I venture to say that not one customer out of a possible ten would take his car in this place. This is about as good a reason as any why the garages about town are picking up a lot of stray repair jobs.

When my friends want service, or desire to have work done for which the service station mechanics are particularly equipped, they are, with few exceptions, obliged to ride to some place far distant from the salesroom. Particularly is this true of smaller cities and towns where dealers seek a main street location for a display room and rent the cheapest, most out of the way quarters they can find to hide the "service station." I have in mind one dealer who has his sales and service departments separated by a distance of three miles. It isn't any wonder to his customers that the service station doesn't gather their shekels.

Before purchasing a car any customer becomes fairly well acquainted with the salesman, the dealer and perhaps the sales organization in general. When he later drives to some remote service station he feels strange and neglected. He is inclined to say, "Oh well, I guess I'll drive back to the garage and let my man do the job."

But mere enormity or prominence does not make a service station that pleases customers and sells cars. Motorists are as wary of the big places as they are of the small ones because the large service stations invariably lack the "personal touch," if I may use this expression, which is as essential to servicing car owners' troubles as it is to selling cars. Most of the large stations are guarded with signs reading "No Admittance," and, whether or not the rule is adhered to, the customer is reluctant to let the car out of his sight. He wants to see what they actually do to it. He doesn't want to be a nuisance, but he wants to feel at least that the mechanics know exactly what he wants done. When he finds, however, that his car is to be shot up to floor 5 and given a seance with a pair of automobile faith healers his mind naturally drifts back to Jones—Jones being the mechanic at his garage who prefers to have you stay around while he works so that he will not overlook anything you might want done.

When a service station is lacking in the "personal touch" it immediately releases its hold upon the customer. This gives another car owner the chance to say, "Don't buy an Exalted Eight; you'll never get decent service." It simply erases all the progress that the selling force has accomplished.

My difficulty with large service stations in cities has been:

1—That no one seems to have authority, or perhaps initiative, to listen to my tale of woe.

2—Friends of the mechanics, or others better known around the place, are favored with rush jobs while my car is tied up an unnecessarily long time.

3—The car is never finished on time.

4—At least two of the things I have asked to have done were forgotten.

5—The car is always turned out with its controls and the upholstery soiled and greasy.

6—The fenders are either scratched or dented.

7—The labor charge on the bill is excessive because of the habit many mechanics have of floating from one job to another.

8—I know no more about the cause of the car's trouble after it is remedied than before.

I find that much of the hostility toward service stations vanishes when the sales force keeps in closer contact with the service end of the business. A dealer with a very large business, of course, cannot be expected to give more than a small proportion of his time to personal inspection of service work, but that time, however small, is vital and

What a Car Owner Thinks of Service and Why

THE writer of this article, formerly a resident of one of the Middle Atlantic States and now living in New England, apparently has not had dealings with some of the really efficient service stations of the country. But his experiences have been duplicated by many owners dealing with many—too many—service stations which are not efficient.

Readers may not agree with all the things Mr. Russell says of dealers, nor with his suggested service policy, stated in the final paragraphs of his article, but they are likely at least to read with interest what he has to say and to think quite seriously about it.

That is why Mr. Russell's article, the frank opinion of an automobile owner, has been printed—to prompt still another line of thought regarding this subject of tremendous importance to the industry—dealer service.

can be used to splendid advantage, because only by coming in personal contact with customers who have complaints to register can a dealer learn to strengthen his sales arguments to meet the onward march of competition. I know of one dealer who prowls around the service station as many times a day as he is able to. Many customers do not know who he is and frequently an impromptu conversation with a dissatisfied customer turns a "knocker" into a "booster."

If the dealer himself cannot give much of his time to personal inspection of the

service station at least his salesmen should give some of their time to this important part of the business, because new sales very largely originate in the service station through the indirect, though powerful, word-of-mouth variety of publicity.

When a friend of mine, a car owner, complained about the exorbitant amount he had been charged for a little service work the dealer admitted the injustice of the bill and promptly relegated it to the waste paper basket. The dealer diagnosed his problem by stating that he had been too busy to give the service station the attention it needed.

"Why haven't you the time?" asked the car owner.

"Because," the dealer replied, "I am so busy trying to sell more cars."

"Then you are going at it in the wrong way," was the prompt comment of the customer. "Your field is in the service station. I've just told three of my friends about this exorbitant bill, and I don't believe it spoke very well for your business. You lost three prospects while you were giving your time to one. It ought to be a lesson to you that indifference toward the functioning of the service station is simply wasting your chances at the bung-hole."

A great deal is being said on the subject of intensive selling, but for the motor car dealer it starts with the service station.

Like millions of other car owners, my ideal of a service station is one where I can explain my trouble to a competent foreman who will do as he promises. The station should be adjoining the salesroom, not several miles away up a side street. The salesman who sold me the car should have a talk with me either when I leave the car or when I come back to get it. He and the foreman should tell me how to avoid having similar trouble again. And when I pay a fair charge and leave I should feel that I am still "sold" on the make of car I drive. That is the service that will sell.

"Matches Up" Used Car Seller and Buyer Through Want "Ads"

“WHEN I want to make a quick deal in a used car and get the top price out of it,” says R. F. Mahan, proprietor of the Mahan Motor Co., Ardmore, Pa., Marmon and Hupmobile dealer, “I scan closely the many want advertisements among the automobile ‘liners’ in a certain Philadelphia afternoon newspaper. I pick out a promising looking ‘ad’ in which the writer says he seeks a certain make and type of car, and find out what he is willing and able to pay for it. Then I try to ‘match him up’ with another advertiser who has a car as near to the first advertiser’s wants

as possible. Of course, I find out in advance just what he will take for his car.”

Mahan has the handsomest showroom on Ardmore’s Motor Row—East Lancaster Avenue. Ardmore’s population is about 15,000. Mahan was born and brought up there and has special sources of information on the financial standing of “Main Line” folk, enjoying an extremely wide acquaintance among them. By way of selling appeal he emphasizes car suitability and excellence, service and reasonable prices for repairs. He has three active salesmen and attends to all the “stop-in” trade himself. The

salesmen are paid to hustle, and they certainly do it. He sees that they have cars to get about in, and he stresses demonstration. He gives free inspection every thirty days and reminds his customers when they fail to report.

“With all the wheel and leg work,” says Mahan, “our salesmen don’t forget to work the telephone, and many a prospect is obtained in that way.”

“We are on the alert to do either large or small favors for our customers, and they generally reciprocate by suggesting the names of friends or acquaintances who are considering buying a car.”

**Automotive
Equipment
Sales Promotion
Week
Aug. 6-13**

LET'S DRESS UP
*For Sales Promotion
Week*

THE Sales Promotion Committee of the Automotive Equipment Association has held its first meeting and soon detailed information will be going out to the wholesale and retail trade regarding the plans for helping everybody in the industry—manufacturer, jobber and dealer—to broaden his sales and profit horizon.

If the committee had been appointed a few months instead of a few weeks ago, they would have been able to present to the trade a detailed plan for carrying out Automotive Equipment Sales Promotion Week, Aug. 6 to 13. As it is, the committee has been able only to suggest active participation by jobbers and retailers in this special promotion activity, leaving to individual members of the trade the details of working out their part of the program.

In one way, this condition is unfortunate, but in another, it is just the opposite. It gives the trade an opportunity to employ its own initiative in assuring the Automotive Equipment Association that it stands ready to welcome and support the sales promotion movement. By taking part in sales promotion week jobbers and dealers can do two things:

1. Show their sympathy with the sales promotion idea.
2. Stimulate midsummer business and make extra midsummer profits.

JOBBERs and their salesmen who want to induce participation by their dealers in sales promotion week and dealers who want to undertake participation on their own account would do well, considering the short time available for preparation, to put their principal efforts on display.

We are now at the height of the touring season, when people are getting the most out of their automobiles. It is the time of the year when attractive displays of accessories will accomplish the most in inducing sales. It is the time when accessory dealers and garagemen with accessory departments ought to be exerting their utmost efforts to make their windows, showcases, shelves and special display cases appealing to prospective purchasers. It is true that it is also the time when garagemen in particular are busiest with home and transient repair business, but considering the profit possibilities in accessory sales any automotive business man with an accessory stock ought to make an effort, even at the expense of overtime work on the part of himself and his men, to dress up his display and make an active bid for merchandising business.

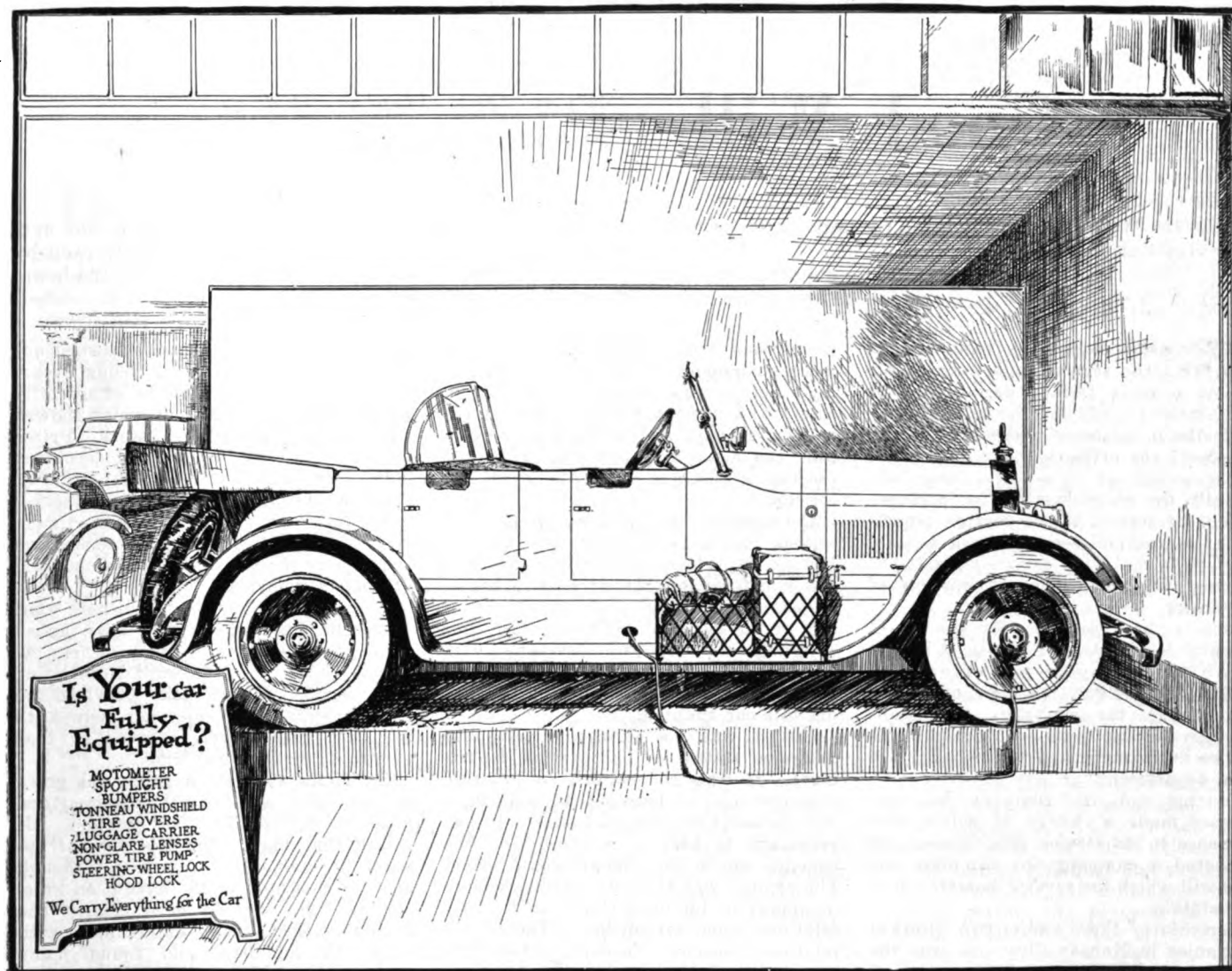
"Drawing cards" such as newspaper advertising, road and store signs, accessory sales letters and gas, oil, water and air service, intended to bring motorists to an establishment, all have their value, but unless such efforts are supplemented with bright, clean and attractive displays of goods, sales will not reach the volume that might otherwise be obtained.

DEALERS who make the most of the opportunity offered by Sales Promotion Week and who continue their special accessory merchandising effort will find themselves, when Labor Day rolls around, counting up some rather neat profits on their turnover of goods.

Let's all get together and make Sales Promotion Week a turning point in our attitude toward accessory merchandising. Let's prepare ourselves for vigorous participation in the sales promotion movement which is to be made a permanent part of the work of the Automotive Equipment Association.

AND HERE'S A DRESS UP IDEA

Automotive
Equipment
Sales Promotion
Week
Aug. 6-13



Can You Display Accessories ON THE CAR—Like This?

The window display sketched above is a suggestion for Sales Promotion Week—try *something different* on the people who pass your salesroom or store front.

Instead of showing accessories on the flooring of a window or on display standards, show them **ON THE CAR**, suggesting them to the car owner as things that will improve his car, not mere articles of merchandise which he associates only remotely with the car.

In this sketch it is suggested that the car dealer take one whole window, place an accessory-equipped car in it and erect a screen of some sort behind the car so that the automobile will stand out. You know how hard it is to see a car through a window, much less see the equipment on it if the only background is the depth of the salesroom itself. It is also suggested that a garageman or accessory dealer having window space large enough

to accommodate a car follow the idea, even if he has to do some carpenter work to remove hitherto permanent window flooring and background.

The accessory-equipped car will speak for itself, showing the high class appearance and suggesting the utility of the accessories displayed, but the idea can be strengthened by employing a neat placard, such as is shown in the sketch, to list the accessories shown.



Part of the crowd of Hupmobile owners who rode in the parade and were guests of the W. C. Howard Motors Co., Kansas City, at a picnic in Swope Park, June 25. The parade and picnic, and a party on a later evening, were features of the company's program of stimulating good will, incidental to combining the service and sales departments

Good Will—What One Dealer Did to Stimulate It Among Owners

GOOD WILL is the most important asset of any institution.

One function of the service department of a dealer is to hold and build good will of the owners.

"It is not enough," say some dealers, "that the service department make money, or make friends, or do both. It must make friends for the sales department—be a means of increasing sales."

Because the primary object of a dealer is the selling of cars—this being incidentally the simplest road to increased volume of service if the service department is profitable—it becomes a vital question to make the service department enhance the good will of owners toward the dealer.

This is the view taken by the W. C. Howard Motors Co. of Kansas City.

"We want the good will of owners," said R. W. Conant, manager of wholesale sales of the company. "We want to cultivate this good will through the service department and secure it for the sales department."

To this end, the company has this summer made a change of policy with reference to its service department, and instituted a campaign to stimulate the good will which the service department is to maintain.

Heretofore, there were two Howard companies in Kansas City; one was the sales company, with headquarters at Nineteenth and McGee Trafficway; the other was the service company, in a suburban location. Each had its own management—and the service department showed a profit, as well as the sales department.

But, because of the physical and managerial segregation of the companies, there did not seem to be the desired current of good will flowing to the sales department from owners as a result of the service.

The first step toward the development and utilization of good will for sales, was the consolidation of the com-

panies and the putting of them under one management, in the downtown building. Service thus became an adjunct of sales—and when a prospect buys a car he sees clearly, and is made to realize, that the same company that sold him the car is going to take care of his car for him.

Conversely, the owner, being well served, instinctively credits the Howard Motors Co., which sold him the car, with the gratifying quality of service he receives. And being well served, he is the better satisfied with his car, thus crediting the Howard company with having sold him a good car, rather than crediting the service company with keeping this car running.

But it was not enough to establish this new status for the service department. It was not enough to institute this new relation between the company's two elements and the customer. It was necessary to cash in promptly on the benefits which the change would bring. The change was to bring about, through its operation, the maintenance of friendly relations when established. The sooner relations became friendly, then the better; and the larger number of owners who were overtly and enthusiastically friendly the more effective would the new policy be.

Therefore—

The company planned to establish at once the friendliness of its owners—make friends of those who might be passive, and stimulate the friendliness of those who might be lukewarm.

To accomplish this, the company held a "Hupmobile Week" for Kansas City. The efforts of this week directed specifically at owners, included a parade, a picnic and a party. The parade was held June 18. In response to written invita-

This good will is necessary for the success of the service department. And the friendly feeling cultivated by the service department can and should react for the benefit of the sales department.

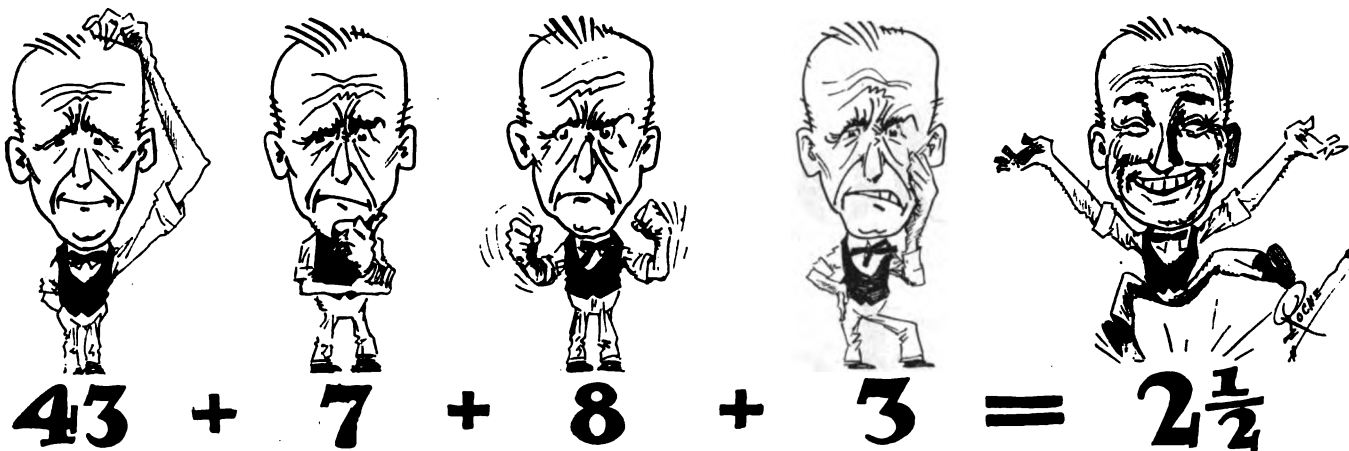
tions, 129 Hupmobile owners turned out with their cars—every car being decorated with banners, or flowers, or specially prepared designs, many of which showed extraordinary thought and work. Prizes had been offered for the best decorated cars. The parade attracted attention as it passed through the downtown streets—incidentally providing good advertising. But its chief effect was, as intended, on the owners themselves, who thus boasted of their Hupmobiles.

Following the parade, the owners went to Swope Park where they were joined by a hundred or more other owners, as guests of the W. C. Howard Motors Co., at a picnic. The company provided the refreshments, and salesmen helped to see that games were started so that everybody had a good time.

On Thursday night a party was given at the sales and service headquarters, attended by nearly 1000 persons. It rained that night—but this did not apparently seriously interfere, though another thousand might have been present had the evening been clear. The guests danced, were entertained with vaudeville numbers, and found many amusement devices provided for their diversion. A jazz band played from 8 to 12. The guests included many prospects as well as owners.

The parade, the picnic and the party not only made friends of owners, but made these owners realize and admit that they were friendly to the company—they became actively friendly, boosters, and ready to discuss all matters relating to their cars in a cordial spirit.

Perhaps other readers have conducted good will activities. Their stories would be as helpful as this one from Kansas City. Send them to Motor World.



If You Don't Believe It, Try It

By RAY W. SHERMAN

"BUT what I want to know," declared Hevitt, the truck sales manager, "is how I'm going to make the truck department produce some business for C. J. Reilly, Incorporated. What's the use of me hanging around here drawing a salary and not getting in any money? You're no philanthropist—and I know it—and you know it—so why try to kid one another?"

"Well," said Reilly, who sold the Sennett car and the Sayanna truck in and about Callawassa, "I'll admit it's a bit of a problem."

"I'll say it is!" declared Hevitt. "And it's just as big a personal problem to me as it is a business problem to you. If you don't make any money in your truck department you can close it up and get by with your cars and other things, but if I don't produce some truck business I have nothing to fall back on—except the back stairs—and they're rather rough and slivery. I'm all out of luck if we don't persuade somebody that the Sayanna truck is a life-saver for his business."

"Well, let's see what we can figure out," Reilly suggested.

"I've figured until I'm blue in the face," said Hevitt. "The inside of my head is like a worn-out arithmetic and my waste basket is full of paper. I've used up the profits of several trucks in waste paper, trying to figure it out."

Reilly, as Hevitt talked, had scribbled in a seemingly aimless manner on his desk pad. Several sheets he had slipped into the waste basket. Finally he handed one to Hevitt and said: "There's the answer."

Hevitt looked at it with a blank stare. He read "forty-three plus seven plus eight plus three equals two and a half."

"Isn't it right?" asked Reilly, with a trace of a smile.

"If mystery is the solution I'll say it's right!"

Hevitt handed it back to Reilly and laughed—but only half-heartedly.

"Well, let's try it," said Reilly.

"I'll try anything once," Hevitt declared. "But WHAT is it?"

"Just what it says," said Reilly. "Forty-three plus seven plus eight plus three equals two and a half."

About this time Tommy Trumbull, Reilly's manager, laughed.

"Come on, Tommy," Hevitt pleaded, "what is it?"

"I don't know," laughed Tommy. "But it's good, isn't it?"

"Here's what it is," Reilly seriously replied. "Forty-three live prospects called on, plus seven demonstrations, plus eight people brought into the salesroom, plus three new prospects dug up from owners or other sources, equals two and a half sales every month."

"WHAT!" exclaimed Hevitt. Tommy looked interested.

"Just what I said," Reilly declared. "If you'll make the number of moves written on this sheet you'll sell two and a half trucks every month."

"I will?"

"To be sure you will."

"How do you know I will?"

"Ah hah! That's a secret. But you just try it and see."

"Gosh, that's a funny one!" said Hevitt.

"Nothing funny about it," Reilly insisted. "If I had told you that the law of averages regulated sales volume and that a certain number of calls was bound to net a certain number of sales you would have believed me, but because I set it down this way you are mystified by it. But you just try it and see what happens."

"Gee, but that's funny!" insisted Hevitt.

"Nothing funny about it," Reilly repeated. "The law of averages is the greatest law in the world. If you start out to-day to call on one thousand people for a certain purpose you will find a certain percentage will say yes. If you take a second thousand under anything like the same conditions and go to them with the same proposition you will find nearly the same percentage will give you the same answer. If you follow through things and keep track of your averages you will find they will run about the

same. That's how insurance people get their figures and it furnishes the basis for a great many other computations. Therefore, if you call on enough people you will make a certain number of sales and if you want to double your sales you simply call on double the number of people."

"Sounds reasonable," Hevitt admitted.

"It's not only reasonable but true," Reilly continued. "And that's where we get this forty-three plus seven plus eight plus three equals two and a half. If you will take one salesman, give him forty-three live prospects on the first of the month, if he will call on all of them at least once during the month, if he will make demonstrations to seven of them, if he will bring eight of them to our salesroom, and if he will hunt around among our present owners and get three new prospects he will make two and a half sales every month, or he'll come so close to it he'll be tickled stiff. And if YOU, as manager of the truck department, want to make five sales a month you simply have two truck salesmen go over the same schedule."

"But, get this part of it right: This doesn't mean any old prospects; it means LIVE prospects. And it means real, intelligent calls, not just sticking your head through the door and saying hello. And it means real demonstrations. It means getting the prospect to feel the truck, to sit on it, ride in it, see it run and actually realize that it's a good piece of machinery. Then, the eight people who are brought into the salesroom must be properly brought in. You mustn't grab them by the neck and drag them in. They must be properly induced to come in. And the three new prospects you dig up must be real ones and not mere names. The formula is all right and the result will be correct but you MUST get quality ingredients. You can make a highball out of wood alcohol, BUT—"

"Say," asked Hevitt, where'd you get these figures anyway?"

"Stole 'em from Hal Boulden," said Reilly.



Dollar Ideas

Earn a Dollar

MOTOR WORLD will pay \$1 each for ideas for this department. The ideas should have to do with sales and business management. The idea should be in two parts:

- 1—The problem.
- 2—The solution.

But if you'll get the idea on paper in any fashion whatsoever, we shall be glad to shape it up for you. Do two things:

- 1—Help some other man.
- 2—Make a dollar for yourself.

A Flat-Rate Inspection Service

A FLAT charge for monthly inspection service is one of the plans the Tri-State Sales Corp., White Plains, N. Y., is using to get business. For the sum of \$50 in advance this dealer agrees to furnish his customers with a monthly inspection for a year, test and lubrication service. The same service is furnished at a monthly rate of \$6. In selling this service, the customer's attention is directed to the fact that the resale value of his car at the end of the year will be more than enough greater to pay for

the service. The charge for the service is sufficient to cover the cost of the lubricants used and the labor, the latter being minimized by the use of a Turn-Auto.

This Dealer Has Baby Carriage Taxi Service

C. S. JOHNSON, retailer in automobile tires and supplies, and hardware, Bowling Green, Wis., uses baby carriages to promote his sales, and the idea is worthy of copying or adapting



TRI-STATE SALES CORP.
2 and 4 Mamaroneck Ave.
White Plains, N. Y.

CONTRACT

TRI-STATE SALES CORP. in consideration of the payment of Fifty Dollars in advance by _____ with the following inspection and test service for a period of one year from date.

or
TRI-STATE SALES CORP. in consideration of the payment of Six (\$6) Dollars per month in advance by _____ with the following inspection and test service for a period of one month from date and to continue such service from month to month as desired and at such rate:

INSPECTION AND TEST

- | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| 1. Lubrication
Renew oil
Oil and grease | Gears
Shifter
Universal joints and shaft
Joints and covers
Shaft |
| 2. Motor
Motor tune up
Valve tappets
Cooling system
Radiator
Fan and belt
Pump
Hose
Carburetor
Gasoline system
Lubricating system
Strainers
Ignition | 4. Running gear
Frame and tire carriers
Fenders and splashers
Springs and bolts
Snubbers and shock absorbers |
| 3. Clutch
Plates
Bearings
Transmission | 5. Rear axle
Axle shafts and bearings
Differential
Wheels and tires
Brakes
Foot and hand |
| | 6. Front axle
Steering
Control, throttle, gas and air |

The car entitled to this service is Make
Model
Motor No.

and is to be delivered to TRI-STATE SALES CORP., Service Department, monthly for a thorough inspection.

Dated, White Plains,
1921 _____

Accepted: TRI-STATE SALES CORP. _____

By _____ Salesman _____

under certain conditions, according to the good results Johnson has obtained. Bowling Green is a town in the mining and dairy district which needs the farmer trade. Several months ago, one Saturday afternoon, a tired farmer's wife exhausted all means of keeping the baby quiet in the store. It was a rush afternoon, as Saturdays usually are. Johnson suddenly bethought himself of an old baby carriage he had somewhere in the rear of the store. He got it out, dusted it and offered it to the grateful mother. This gave Johnson the idea to put in a battery, or fleet, of six baby carriages. The plan has developed so far, and brought so much trade that Johnson is just this side of adding a nurse. At any rate, he gets mail reservations for the carriages early in the week, from farmers' wives. He has already succeeded in building up a big Friday business, in addition to Saturday, by virtue of forcing excess reservations from Friday over into Saturday. He says he will have to use Thursday, too, and wouldn't be surprised if Wednesday came in, also, in a short time, if not Tuesday. He believes that Monday, so far as farm trade is concerned, would be out of the question as a big shopping day, owing to the accumulation of farm work, washing, etc., on that day. The neighborhood has innumerable small cars and some tractors, and Johnson is plainly the leader of the county for tires, accessories and supplies.

Window Displays That Attract Tourists and Campers

A Spotlight Effect

Willys-Overland, Inc., New York City, enclosed their show window with blue plush draperies. At each rear side a large vase of chrysanthemums was placed. The late model car occupied the center location, the car being bathed in a mellow flood of light, produced by a concealed orange shaded spotlight from above. An urn-shaped orange lamp stood near the car at each side. This made a very impressive fall exhibit.

The Window Map

The Buick Auto Co., Seattle, was also responsible for a suggestive summer display along somewhat different lines. On the window glass a finely drawn map was posted, indicating various routes by which a favorite haunt of autoists could be reached. A sign above the map stated:

"National Park to Park Highway in a —"

A late model car was exhibited in the window.

For Those Who Prefer the Chummy Roadster

The Eldridge-Buick Co., Seattle, introduced an appropriate summer display setting for roadsters. A late model roadster was elevated upon a large truck chassis. As the chassis was well covered with leaves and branches, it produced the effect of a roadster traveling through a path in the woods. The elevated position of the chassis also gave the spectator an excellent opportunity to view the machine.

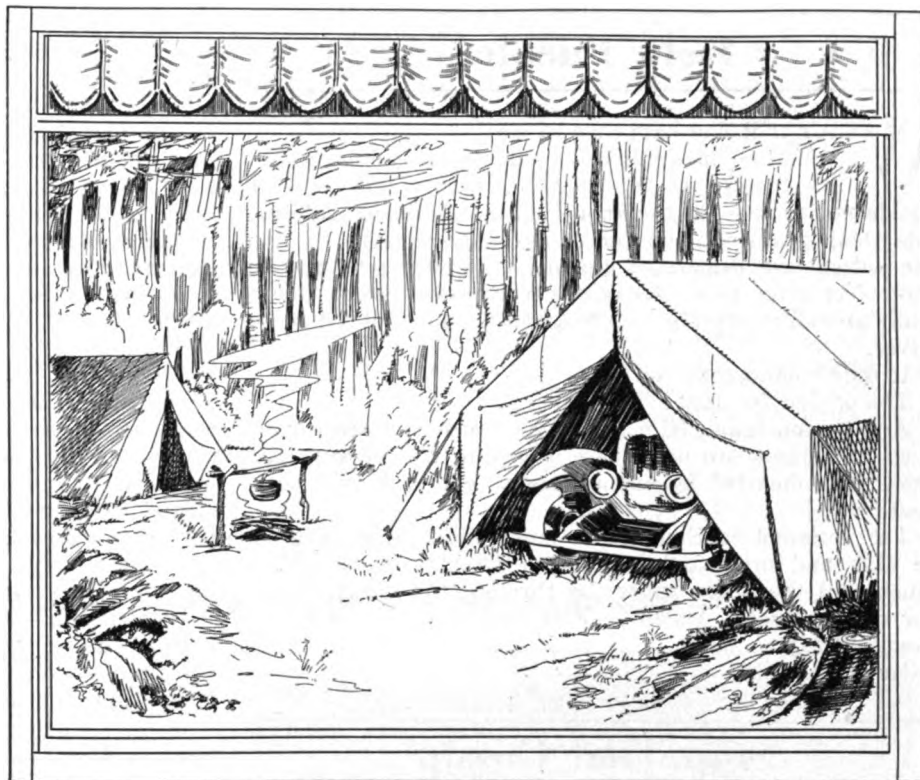
The Advent of Autumn

The Smith Garage Co., Auburn, Me., heralded early autumn with an appropriate window setting. The window was set with forest trees, with fallen autumn

leaves covering the ground. In the background was a small tent, in front of which was a small camp fire with a kettle simmering over it. In the immediate foreground was a large khaki tent. The flaps of the tent were turned

An Appeal to the Tourist

The Shields Livengood Motor Co., Seattle, arranged appropriate summer atmosphere in connection with a display of cars for touring purposes. A latest



back, revealing a handsome touring car inside the portable garage tent. The very sight of this display was sufficiently alluring to make a person wish to buy a car and "take to the woods."

model machine was placed amid pine trees, the whole setting giving the appearance of being in the heart of some thickly wooded country. Such a setting invariably attracts much attention.

The Accessory Merchandiser

Display in Salesroom Sells Special Wheels

A CLEVELAND distributor of a medium-priced "six" has effected a substantial increase in the sale of special wheel equipment by stocking ten pairs of special wheels for special display on his standard demonstrators. A "pair" consists of one right front and one right rear wheel, which are rolled into a position where they cover up the standard wheels on the demonstrator, affording the prospect a good opportunity, in the quiet surroundings of the showroom, to compare types and colors. Wire wheels in two colors, Distel wheels in five colors and wooden wheels in three colors comprise the wheel stock shown. Old car owners and used car purchasers, as well as new car pros-

pects, have manifested their interest in this wheel display method, and profits and installation charges have reached a considerable figure.

How to Ascertain What the Customer Will Buy

A LINE of sales effort that may well be followed in moving many accessories takes account of the items which harmonize with outstanding chassis, body, or present equipment features of customers' cars. For example, the owner who selected natural wood finish wheels on his car is a good prospect to interest in the new wooden bumpers. The motorist who has shock absorbers dislikes spring trouble and may be interested in special spring oil or oilers,

leaf spreaders, or leather leaf covers. Year 'round enclosed car users appreciate convenience and consequently such things as rim compressors, improved jacks, power tire pumps, and cigar lighters. A low-priced car with a motometer shows the owner is interested in correct cooling and might buy a better fan belt or condensor outfit. A special top or curtains or window is a pointer that the owner considers the complete appearance of his car and is the best prospect for windshield wings, tonneau shields, seat covers, etc. A Cleveland accessory dealer has applied such efforts in enough instances to find them generally worth while. The underlying idea is that by lining up a man's hobby it is easier to determine and satisfy his principal requirements. Do you know what your customers will buy?

Editorial Observation

Help Pueblo!

WHAT if it had happened to me? Men in the automotive industry would do well to ask themselves this question before they act—or decide not to act—on the appeal of the National Automobile Dealers Association for money subscriptions to help the automotive dealers of Pueblo, Colorado, get back on their feet after their businesses were swept away, financially as well as literally, by the great flood of the Arkansas River.

It didn't happen to you!

Thank God for that!

And as you thank Him think how much you can give—even if it hurts—to help these energetic Westerners, who aren't downhearted by any means, to get back into business.

The Automotive Equipment Association raised \$17,000 in cash and merchandise for one Pueblo jobber. How much will the trade subscribe through the N. A. D. A. for all the Pueblo dealers? Five dollars will be welcome—so will \$100.

Help Pueblo!

Stop That Gossip

ON several occasions since the beginning of the readjustment period more than a year ago, Motor World has felt called upon to suggest that men within the automotive industry do everything possible to avoid repetition of stories about financial difficulties of contemporary firms. The subject is called to mind again by an energetic effort being made by the Motor Car Dealers' Association of Los Angeles to put a stop to harmful gossip which has been going the rounds of the trade in that city.

The automobile department of the Los Angeles *Evening Express* suggested to the association that considerable harm was being done by circulation of rumors to the effect that certain companies were in financial straits or were going to reduce the price of a product they sold or otherwise were supposed to be about to do something or to have something done to them which would make a delectable morsel of conversation. The Los Angeles association quoted from a letter from the *Express*, which said it could not "see where any possible benefit to the industry or any individual firm can result from the repetition of such unfounded rumors, even were there truth in them. Results would be negative rather than beneficial, and with so much gossip going around in the trade some of it is certain to reach beyond trade circles and it does not take much of a stretch of imagination to see what the ultimate outcome will be; lost confidence in the automobile business, suspicion on the part of financial interests, and an attitude of distrust on the part of the buying public toward the automotive industry in general." The *Express* continued, "Let's all get together and assume a close-mouthed attitude

on all adverse comments. If other lines of commercial endeavor can refrain from passing along chatter about another firm's misfortune and rumored ill luck, then the automobile business can."

The Los Angeles association made the letter and its own comment the subject of a special bulletin to members and followed it up with personal persuasion. If there are other cities where the rumor factory is working overtime, it might do well for dealer associations or groups of dealers to get together and have a similar understanding to smother these calamity tales.

The automotive industry, both in the manufacturing and merchandising divisions, has weathered wonderfully the rough sea of readjustment. The men in the industry know this. They know better than to believe most of the tales which are circulated about overdue bills, strained credit and impending bankruptcy of manufacturing and mercantile concerns, because time and time again these stories have been proven untrue. However, in many cases the false information has been circulated in casual conversations without ill intent on the part of the gossipers, but with ill results just the same.

What the industry needs to-day is greater faith in itself and its future and greater toleration among the men in it one for another. Such an attitude will create public confidence and help to speed the return of normal conditions.

Get the Right Men

WITHIN another month campaigns for nominations to the legislature will be under way in a good many states. When these campaigns begin and not after men are nominated for or elected to office is the time when business men should give thought to the caliber of the persons who are to represent them on the state law-making bodies.

The automotive industry has suffered much in the past years through discriminatory legislation and through being put to expense to prevent passing of such laws. The only way to do away with this evil is to improve the character of legislators from the standpoint of their attitude toward business. If we have men in the lawmaking bodies of our states who have a reasonable appreciation of the opportunities and responsibilities of business, we shall have less unfair legislation and less wielding of clubs over the heads of business on behalf of special interests of various sorts. Our legislators will be as good as we want them to be and the only opportunity we have to indicate our desires in this respect is at the primary and general elections.

Men in the automobile business, through their local, county and state trade associations, have an opportunity to examine the attitude toward business and general qualifications of candidates for the legislature and to exert an influence toward getting the right man in office. Now is the time to do this sort of work for the good of the automobile business and all business.

LETTERS *from* READERS

"Let's Make the Used Car Produce a Profit"

Editor Motor World: The story on page 13 of June 22 Motor World, "Let's Make the Used Car Produce a Profit," certainly makes a hit with me because it so aptly covers the situation in New Haven, Conn. I hope that Motor World will continue banging at this used car situation, because it certainly is serious.

The opening paragraph of this article, where manufacturers are criticized for having listed their product at too high a price and extending a big discount to encourage trading, is to my mind the crux of the situation, and it seems to me the more Motor World bangs away at this particular angle in an endeavor to educate or make offending manufacturers see the light of day, the better.

Many of the abuses of the automobile business, it has seemed to me, have started with the manufacturers, and if the manufacturers of this country could

be induced to conduct their affairs in such a manner that they set a good example to their dealers, it would go a long way toward putting the automotive business on the high plane that it is entitled to occupy, but which it certainly does not. I am quite sure that hundreds of other dealers throughout the country appreciate what your paper is trying to do in this matter and hope that you will keep the good work up.

Please do not think that this is a criticism of all manufacturers, because it is not. There are some as near 100 per cent as you could hope to have them, and credit is due them, but you know as well as I do that there are others who certainly figure things out the wrong way.—New Haven Reader.

Likes Prospect Cards

Editor Motor World:

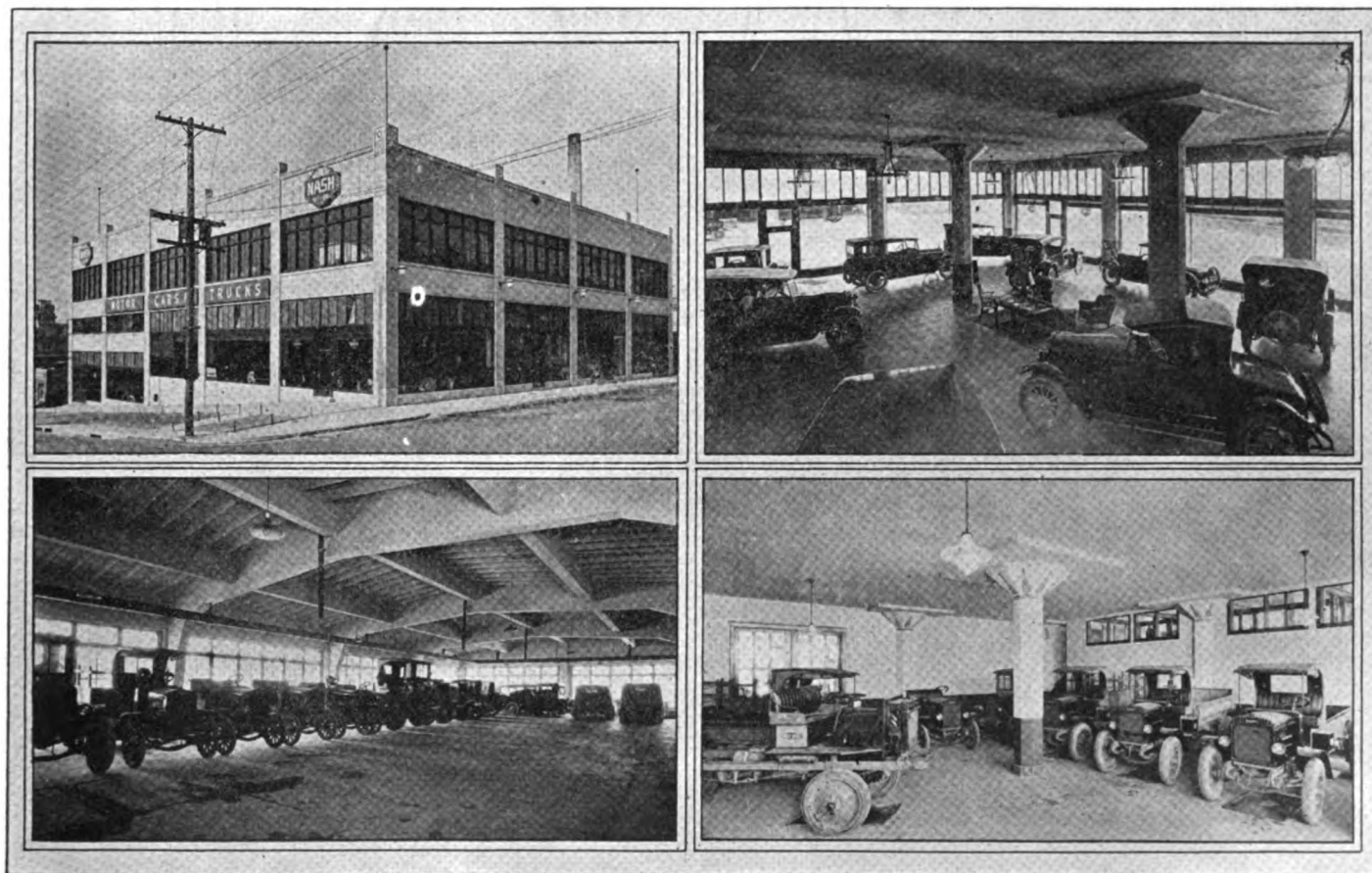
Some time ago we obtained from you a quantity of your prospect follow-up

cards. We have found that these work out very satisfactorily.—Interstate Auto & Supply Co., Davenport, Iowa.

How to Stimulate Luggage Carrier Sales

JULY and August should be particularly big months for the sale of luggage carriers. Some accessory dealers are moving large stocks of them by sending canvassers to summer cottage colonies for house to house sales effort. Others are making good use of lists of prospects secured through nearby automobile clubs and highway and trail headquarters consisting of names and addresses of people in the territory that have written for touring information. The columns of newspapers which contain items telling of proposed automobile tours by townspeople is another good source of luggage carrier prospects. All of these fields may be solicited for sales by letters or personal calls.

New Nash Sales and Service Building in Salt Lake City



The building is 125x110 ft. and is constructed of steel and concrete, and finished in white tile. The passenger car salesroom has ample room for the display of nine cars and the capacity of the truck salesroom is seven. The shop is on the upper story.

A Department of BETTER MECHANICS

Conducted by J. HOWARD PILE

No. 201

When asking for information, please state whether you maintain a permanent file of Motor World, as many inquiries are answered by reference to previous issues

Calipers and Dividers

Description and Uses of Various Types

FOR working measurements and for laying out drill press, milling machine and other turned and bored work, inside and outside calipers are used. The general forms of these are shown in Fig. 1 and 2. The firm joint caliper shown in Fig. 1 consists of two legs held together by a screw which is adjusted so that there is sufficient friction to hold the legs in any set position but not so tight that they cannot be moved. It is possible with careful work to measure diameters and distances down to 1/50 or 1/100 of an in. compared to a scale. If a standard cylinder is available and the measurements can be transferred from the standard cylinder to the work, even closer measurements can be made if the workman is skillful. The proper way to use a caliper is to hold the upper part of the caliper between the thumb and fore finger and let it slide down lightly either over the cylinder or into the hole. When the correct diameter is obtained the caliper should just slide over the work or into the work, as the case may be, by the weight of caliper. There should be just a slight sticking and then the weight should carry it through. By very carefully gauging the difference in the stick and how much

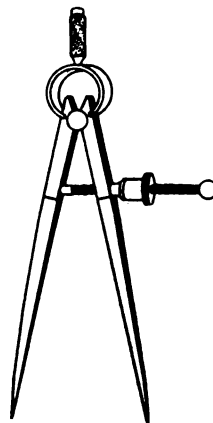


Fig. 3

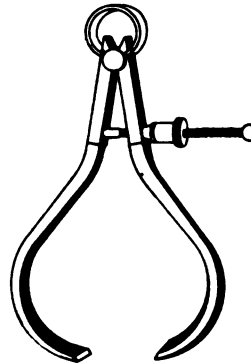


Fig. 4

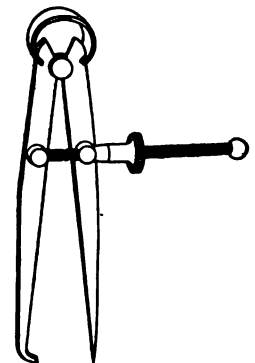


Fig. 5

Fig. 3—Spring dividers. Fig. 4—Thread calipers for measuring the root diameters of threaded cylinders. Fig. 5—Hermaphrodite spring calipers for centering and scribing from an edge

force is necessary to make the caliper ride, the accuracy of the work can be brought down within a 0.002 of an in.

The spring calipers shown in Fig. 2 are adjustable by means of a nut. Work can be more rapidly gauged with these calipers than with the firm joint calipers,

although there are certain advantages about the firm joint calipers that are not present in the spring calipers.

For certain purposes, such as measuring the root diameters of threads, calipers shown in Fig. 4 are used. These have sharp points which go into the smallest diameter of the thread, and by reference to available tables the pitched diameter of the thread can be obtained. It is sometimes unreliable to measure the outside diameters of threaded bolts and rods. Fig. 5 shows a hermaphrodite spring caliper which is used for centering and scribing from an edge. In locating a center of a cylinder or rod, the longer leg of the caliper is placed on the outside of the cylinder and the points set a little more than what is judged to be half the diameter. Lines are then scribed from four directions and the centers marked with a center punch.

Dividers, such as shown in Fig. 3, are used for laying out work, measuring distances between centers and scribing circles. These are especially useful in laying out work that has to be drilled.

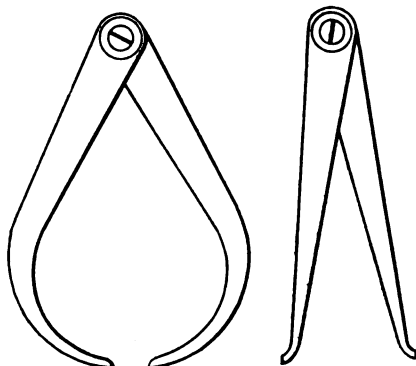


Fig. 1

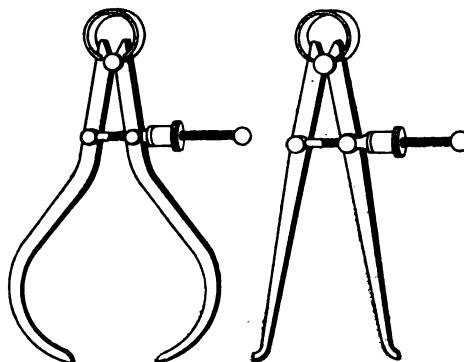


Fig. 2

Fig. 1—Firm joint calipers, the left being for measuring outside diameters and the right for inside diameters. Fig. 2—Spring calipers for outside and inside measuring

Repairshop Shortcuts

No. 2992—Screwdriver for Close Places.—A screwdriver for inserting screws in places difficult to get at is made from a flat piece of steel which is flattened at the lower end and tapered to form the screwdriver blade. The ends spring out and hold the screw while it is being put in place.—Reader.

No. 2993—Aligning Clutch Parts.—When assembling a clutch which has been previously taken apart, a spare clutch shaft is put in place while the cover bolts are being tightened so as to bring the disk, rings, etc., inside the clutch in line. After assembly this shaft is removed until the clutch is assembled on to the transmission shaft.—Scott S. Bond, Hattiesburg, Miss.

No. 2994—Holding Shims on Connecting Rods.—Shims are held in place on the connecting rods while the cap is removed by means of a metal clip which is bent and cut, as shown in the illustration.—S. E. Gibbs, Corydon, Iowa.

No. 2995—Rear Axle Housing Liner.—After straightening a rear axle housing and testing in a lathe, this lining device will show if the housing is at right angle to the torsion tube or driving shaft.—F. A. Pearson, Willys-Overland, Inc., New York City.

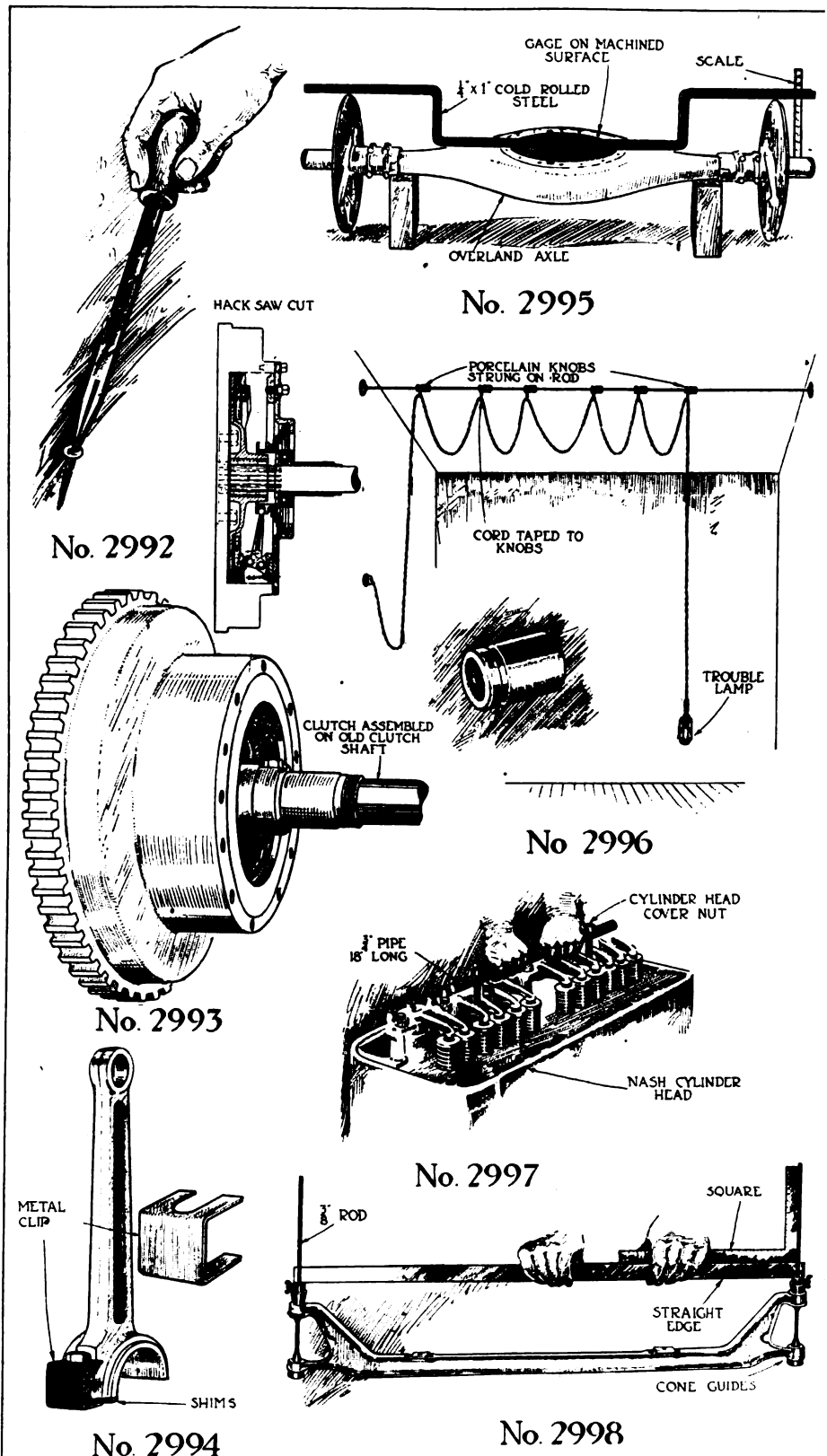
No. 2996—Trouble Lamp Suspension.—A trouble lamp is suspended on a number of porcelain knobs which are strung on a rod across a wash rack or other point where the trouble lamp is used. The knobs slip easily on the rod and the cable is kept off the floor.—C. E. Fonda, Eugene, Ore.

No. 2997—Cylinder Head Lifter for Nash 6.—This lifter is made of a piece of $\frac{3}{4}$ -in. pipe with holes drilled to take the studs, nuts being run on the ends.—Scott S. Bond, Capital Auto Sales Co., Hattiesburg, Miss.

No. 2998—Front Axle Liner.—This liner can be applied to any size axle and the cones guide themselves to the center of the hole. The top cone is adjustable and held in place with a set screw.—F. A. Pearson, Willys-Overland, Inc., New York City.

EARN A DOLLAR

SEND in a sketch and a description of the device you doped out to make your work easier. Motor World will pay a dollar for every idea accepted for publication.



THE LAW

By GEORGE F. KAISER

Perplexed?

Does some point of law perplex you?
Why don't you ask MOTOR WORLD'S legal editor to discuss the question?

Must Cross Sidewalks in Careful Manner

Editor Motor World: What right has a motor car on the sidewalk? If a motorist attempted to drive on a sidewalk he would speedily be placed under arrest. In what way does crossing a sidewalk to enter a garage, or backing out from a garage into the street, differ from driving on a sidewalk? Has a motorist any legal right to cross a sidewalk in that way?—S. M., New York.

Answer—It is true that sidewalks are, in the first instance, meant for pedestrians, and the streets are meant for vehicular traffic. There is no one, however, who would dispute a pedestrian's right to cross a street to get to the other side and, in the absence of statutes, he is allowed to cross at street corners or in the middle of the block if he so desires.

The same is the case with motor cars. Their proper place, of course, is on the street, but if it is necessary to cross the sidewalk to reach the street, there is no restriction on their doing this, if they do it in a careful manner.

Not long ago a case was tried in the Missouri courts in which a street sweeper recovered judgment of \$3,500 from a garageman.

The street sweeper had been standing in the center of the street talking to a friend who had stopped his wagon, when a motor car, being backed out of a garage, crossed the sidewalk, curved into the center of the street and struck and injured him.

The court held that the street sweeper was entitled to judgment because the car had its top up and the chauffeur failed to look behind him. There was no limitation placed on the right to back out of the garage and cross the sidewalk into the street, except the court held that he must use care while backing out and must not be negligent.

Pedestrians must also use care when passing a driveway along which cars are constantly moving to reach the street, but as the walk was primarily intended for them, they may not be required to use the same degree of care as the motorist.

The question will probably never be seriously raised in any lawsuit. Horse-drawn vehicles have habitually been driven across sidewalks on leaving and entering stables for years, and it does not appear that their right to do so has ever been questioned. The motor car having equal rights on the highways with horse-drawn vehicles, naturally possess

like rights with regard to crossing walks.

It would not be surprising, however, if some of the cities or towns in this country should put into effect a law containing provisions necessitating motor cars having signals at each entrance to a garage in the daytime and danger lights at night.

Good Will Sale Must Be Explicit

That one who sells his business with its good will, must in good faith do nothing which will tend to deprive the purchaser of the benefits and advantages of the purchase, is the decision of the Supreme Court of Arkansas in the recently decided case of *Patterson vs. Rogers*, reported in 229 So. West. Reporter at page 711.

In this case the court, however, explained that the purchaser of a business in order to rely on promises on the part of the seller not to re-engage in the same line of business must see that the promises are made definite and certain so that it may clearly appear to what extent the seller is restrained.

Mere general expressions of opinion on the part of the seller that he did not expect to re-engage in the same business were therefore not enough to preclude him from actually re-entering the same line of business in the absence of an express agreement to that effect, as without such an agreement the seller might later change his plans.

Purchaser Must Show Agency Existed

In a lately decided Texas case where suit was brought by the buyer of a motor truck against the manufacturer and an alleged agent, the court held that letters written by the supposed agent could not be used to bind the manufacturer to a warranty unless the fact of actual agency was shown by the purchaser.

The court further held that the buyer having contracted to purchase four trucks at an agreed price was not bound to take two trucks at that price where a greater price was asked for the other two.

The jury having found that the supposed agent was actually a real agent the damage allowed was the difference between the contract price of the four trucks and the price the buyer could have resold them for. *Denby Motor Truck Co. vs. Mears*, 229 So. West. Reporter at page 994.

Should Have Retained Possession of Car

Editor Motor World: A large automobile dealer in Johnstown sold a car on the installment plan, the owner could not make the last payment or two, and the dealer in Johnstown sent a man here to take the car back to Johnstown. The owner being perfectly willing to let it go. (The car at the time being at my place undergoing some repairs, but was completed). The tires being in poor shape, the party to take the car back phoned the dealer in Johnstown that he needed two new tires to make the return trip, and in answer the dealer in Johnstown told me, over the phone, to give him the tires and send a bill along and when he arrived home he would mail me a check for the amount, which I did. I sent him one bill since on June 1, but have heard nothing since except the owner's license tags were returned to him. What should I do in the matter? Also what lien have I, if any, on a car after repairing it? Do I have any lien on it when once outside my building? What is the law regarding this in Pennsylvania?—D. S. M., Cashtown, Pa.

Answer—As to the tires you furnished, the dealer who ordered them from you is liable for their value just as any customer is who orders goods on credit. If he does not pay you when you demand payment, the proper thing to do is to put your claim in the hands of a local attorney and sue the dealer for the amount he agreed to pay you for the tires, or if there was no certain amount mentioned, then for their reasonable value.

In Pennsylvania, as I understand the law, you have a mechanic's lien for repairs on a car, and can hold it until you are paid. Why did you give the car up before your bill was paid? If you give cars away so easily I think I will come and get one. I need a new one!

Partner Not Entitled to Compensation

That a partner, a member of a firm, is not entitled, in the absence of an express agreement to that effect, to receive any compensation for services rendered by him to the partnership, was the decision of the District Court of Appeal of California in the recent case of *Wright vs. Robinson* reported in 197 Pacific Reporter at page 149.

Although this is a well established point of law this is a matter very often unknown to members of partnerships.

SCIENTIFIC CONSTRUCTION

GARAGES

SHOWROOMS

REPAIRSHOPS

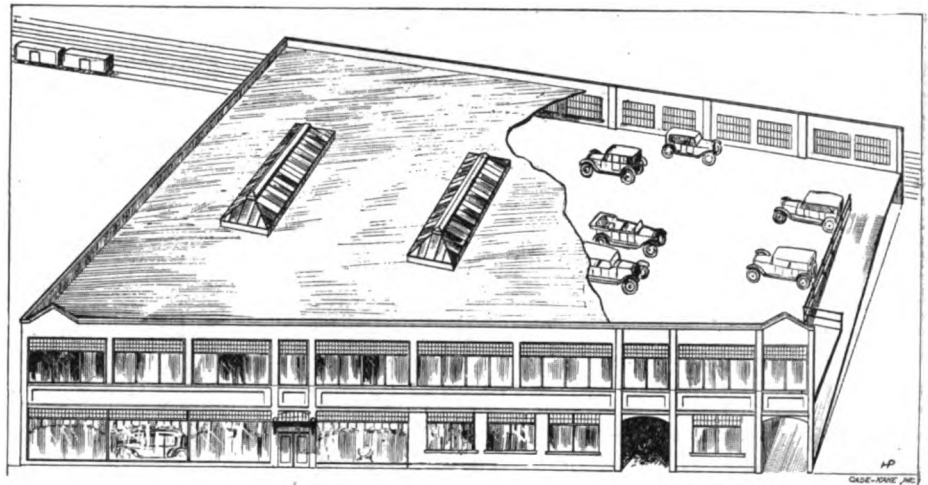
Conducted by DONALD D. BLANCHARD

Irregular Property Interferes with Efficient Layout

Rectangular Building Is Most Economical

THAT an irregularly shaped property is not well adapted to the construction of an automobile dealer building, is clearly illustrated by the floor plans shown on this page. It is difficult to use the storage space on the first floor and in the basement economically and, even with the irregular car arrangement shown, there is a rather high percentage of aisle space. In several places the aisles are narrow or the turns into the aisles are narrow and it will be advisable to store cars with short wheelbases and small turning radii at these points. The turn off the entrance aisle onto the ramp to the basement is so sharp that even cars of moderate wheelbase length will have to use the turntable.

The arrangement of the cars in storage on the second floor is more regular. This

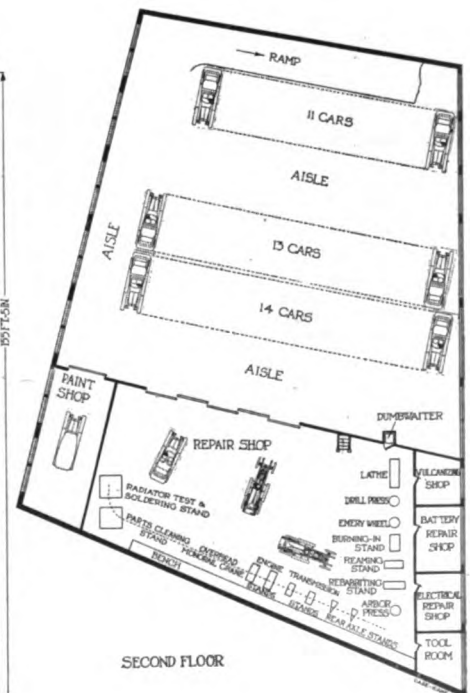
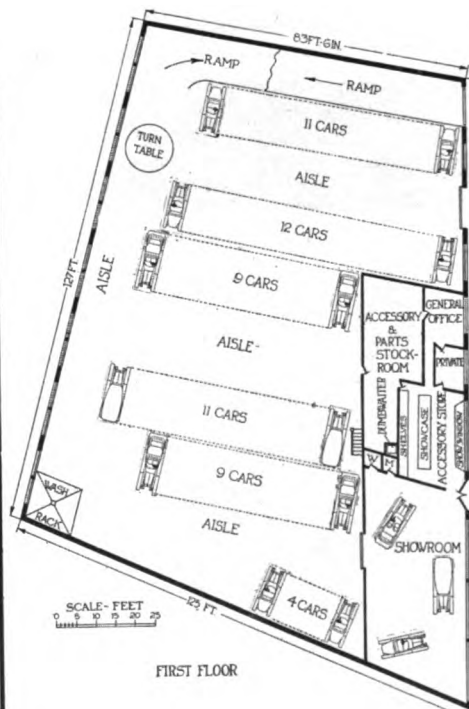
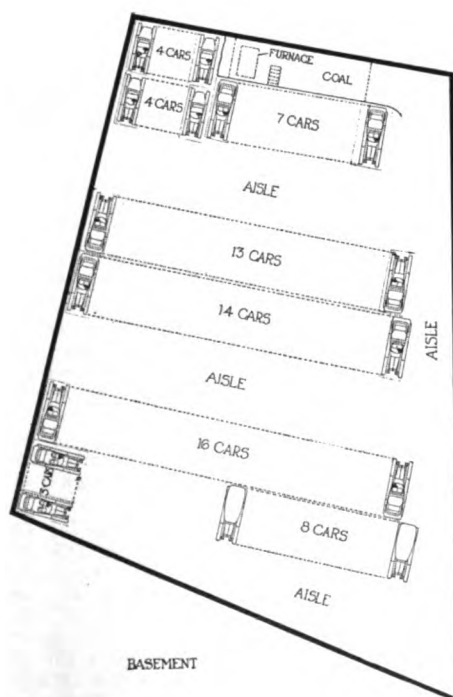


The entrance to the ramp to the second floor is directly from the street

is due to the fact that the shop occupies one end of this floor and is laid out so that it makes the storage space more nearly rectangular. The shop is very completely equipped both for general work and for Ford service. The vulcanizing shop, battery room, electrical repair shop and toolroom are located in individual rooms along the street side of

the shop. A paint shop is provided along the opposite wall.

The executive and sales departments are located along the front of the building. The accessory store and stockroom are adjacent and the latter is connected with the repairshop by a dumbwaiter. Both general and private offices face on the street so that they have natural light.

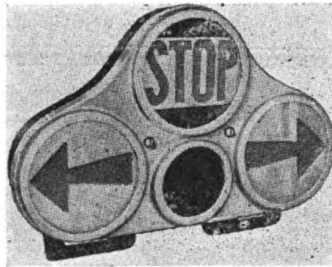


Floor plans for a complete dealer building with an unusually large proportion of storage space

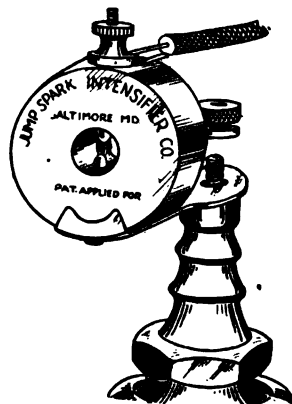
Automotive Equipment

P. E. D. AUTOMATIC SIGNAL

An automatically operated rear traffic signal. An electrical contact is located on the brake so that when the pedal is depressed, the signal flashes STOP. Another electrical contact is located on the front axle. This contact is operated by the motion of the tie rod. When a right turn is made, the arrow on the signal which points to the right is illuminated. For a left turn, the arrow pointing to the left is lighted. The signal is adjusted so that small motions of the steering wheel do not operate the contacts. Price—\$17.50.—P. E. D. Corp., 30 Church Street, New York City.



P. E. D. Automatic Signal



Jump Spark Intensifier

JUMP SPARK INTENSIFIER

This device is attached to the terminal of the spark plug. The auxiliary spark gap is visible so that it is possible to determine whether or not all plugs are firing. Price for set of 4—\$1.—Jump Spark Co., 811 American Bldg., Baltimore, Md.

STANDARD TURNTABLE

This table is used to carry the counter register so that it may be turned around thus making it easy for the customer to sign his order. It is made of $\frac{3}{4}$ in. solid oak. The base rests on four rubber buttons which will neither scratch nor slip. The top is connected to the base by a special steel pivot which locks top and base together, but permits freedom in turning. Price \$15.—Standard Register Co., Dayton, Ohio.



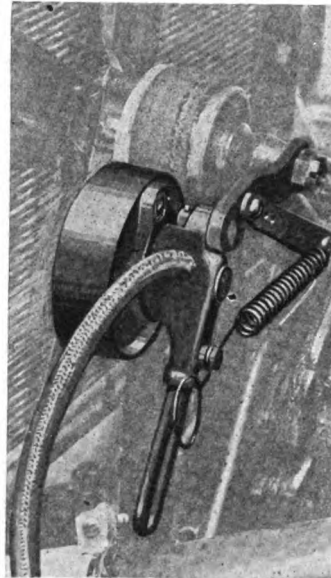
Standard Register Turntable



Boyce Moto-Meter Light

WHIRL WIND PUMP FOR FORD

A power driven tire pump for installation on Ford cars. The pump is held in position by a bracket which is attached to the end of a bolt on which your fan pulley rotates. This bracket is supported by a small brace connecting with the stud that holds the fan bracket in position. When it is necessary to use the pump it is slipped on to the bracket and a small spring holds it in contact with the fan belt, which supplies the power. It is sold complete with 13 ft. of hose. Price \$10.—Rotary Mfg. Co., Wrigley Bldg., Chicago.



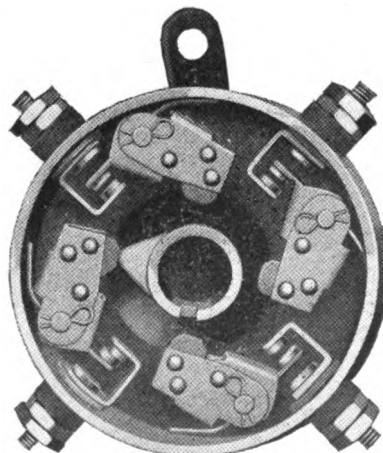
Whirl Wind Pump for Ford

BOYCE MOTO-METER LIGHT AND PARKING LAMP

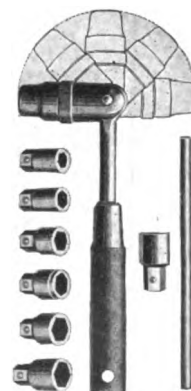
This light is so constructed and installed on the windshield that a strong beam of light is directed on the face of the moto-meter, and it is said that there are no reflections which will interfere with the driver. The lamp may be used as a parking light by turning the rear disk about one-half inch, which opens up six red rear windows. Two brackets are furnished with each lamp—one for open cars and the other for enclosed cars. A rear view mirror for use with this device is also manufactured. A 2-c.p. bulb is used in the lamp. The entire device is made of brass finished in nickel. Price, \$6; Mirror, \$1.—The Moto-Meter Co., Inc., Long Island City, N. Y.

GLADIATOR HIGH TENSION TIMER

A replacement timer for Ford cars and trucks and Fordson tractors. The feature of this timer is that the contact is made by points similar to those used in the breaker of a high tension magneto. One point is located on the rocker arm and the other point is mounted on the shell. A cam located on the shaft closes the contact at the correct instant. The cam operates on a hard fibre block which is moisture proof. This timer is guaranteed for 50,000 miles of service. Price \$5.—The Gladiator Co., 204 Monroe Avenue, Grand Rapids, Mich.



Gladiator High Tension Timer



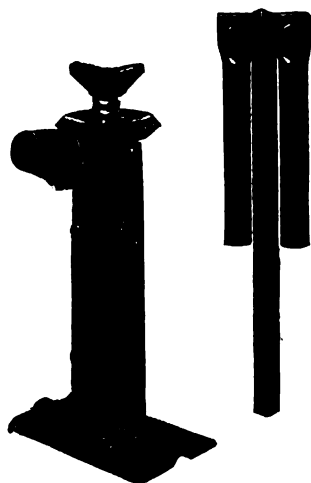
All-In-One Wrench

ALL-IN-ONE WRENCH

A ratchet socket wrench designed to reach inaccessible points. By pressing the button in the head of the wrench it may be set at any desired angle. The ratchet cannot reverse itself. By turning the knurled ring to the right, the ratchet works to the right, and by turning to the left, the ratchet works to the left. The following sizes of sockets are provided with the wrench: $\frac{1}{8}$, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{3}{4}$ and $\frac{1}{2}$ in. An adapter to take care of other makes of sockets with square shank is included with the set. Price—\$10.—All-In-One Wrench Co., 21 South Desplaines Street, Chicago, Ill.

AJAX JACKS

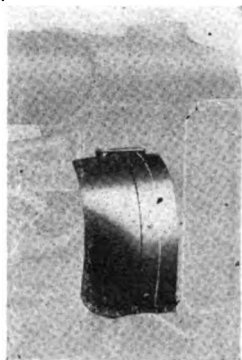
The No. 1 jack is 10½ in. high and has a lift of six inches and a capacity of 2000 lb. It is of the screw operated type and comes complete with collapsible handle. Price \$2.25. Numbers 5, 6, 7 and 9 are of the ratchet operated type. No. 6 and 9 have a capacity of 2000 lb. and No. 7 and 5 a capacity of 3000 lb. The price of two small ones is \$2. and of the two large ones \$2.50—Ajax Auto Parts Co., Racine, Wis.



Ajax Jack

YOST SPEED CONTROL FOR FORDSON

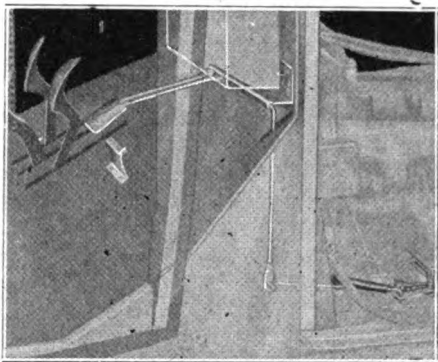
The feature of this device is that the wind from the radiator fan operates the throttle. In as much as the strength of the wind depends on the speed of the engine, the effect on the throttle control varies with the load. When the engine speeds up the increased draft tends to close the throttle. Price \$10.—Yost Auto Co., Sutton, Neb.



Yost Speed Control

J. C. M. FOOT ACCELERATOR

The parts of this accelerator are made of pressed steel. It is said not to interfere with the engine or with the accessibility of any part of the car. It gives full range control of the throttle. Price \$3. each. J. C. Meshaw, 17 Stock Exchange Bldg., Baltimore, Md.



J. C. M. Foot Accelerator

RUNNINGBOARD AND FENDER SUPPORT

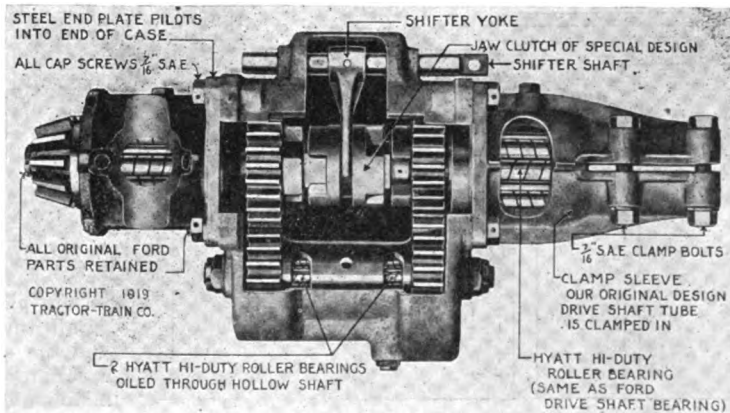
A device for supporting the runningboards and fenders of Ford cars. It is said to be of light and durable construction. It is applicable to either the front or rear end of the running-board and it supports the runningboard in level position rigidly and consequently the fenders are better supported. It is attached to the chassis by means of hooks. Price \$3.25 each.—General Mfg. Co., Hagerstown, Md.



Runningboard and Fender Support

MOORE AUXILIARY TRANSMISSION

This is a compact set of gears applied to the driving mechanism of the Ford car which provides 4 forward speeds and 2 reverse speeds, or gear ratios. The transmission is installed at the rear end of the drive shaft tube and is bolted directly to the differential housing. It is operated by means of a control lever which projects up through the floor boards. It provides gear reductions from 37-11 to 1 to 20 to 1. Tractor Train Co., Los Angeles, Cal.



Moore Auxiliary Transmission

NEO-LITE AUTO SIGNAL

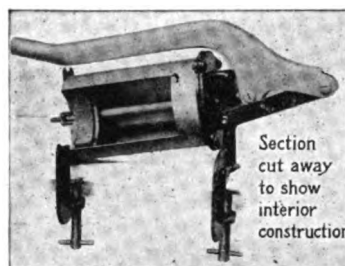
This signal is adapted for mounting on the rear fender and is controlled from the driver's seat by means of a push button. The signal consists of a glass tube shaped in the form of a human hand, which tube is emptied of air and then filled with neon gas. When an electric current is applied to the terminals of this tube, it glows a bright orange-red outlining the red hand of warning. A small induction coil is used to supply the high tension current for the signal. —Federal Signal Company, Albany, N. Y.



Neo-Lite Auto Signal

LIBERTY HIGH PRESSURE TIRE PUMP

This pump has a seamless cylinder which is stamped from one solid disk of steel. A self-acting valve prevents leakage. A compound leverage is secured by the peculiar construction of the operating lever. The piston has a leather washer covering a wooden disk which is saturated with vaseline. A steel band surrounds the wooden disk inside the leather washer and exerts a steady pressure outwards. The clamps by which the pump is attached to the running board are permanently fastened to the pump.—Reece-Hilton, Inc., Troy, N. Y.



Liberty High Pressure Tire Pump



Highway Tire Protector

HIGHWAY TIRE PROTECTOR

This tire protector is made in sections, each section being made of rubber and fabric. They are joined by means of steel hooks and tightening links. It is said that they can be installed in 10 minutes and removed in 5 minutes. They are made in all sizes of tires, from 28 x 3 up to 40 x 5 in. All necessary tools and instructions are furnished with each pair. Prices range from \$7.70 up to \$25.90. Bukolt Mfg. Company, Stevens Point, Wis.

VOORHEES CONQUEROR AIR HOSE.

The tube and cover of this hose are said to be made of the highest grade of material and rubber and fabric are practically inseparable. Its resiliency is said to be such that heavy trucks may pass over it without injuring it. It is guaranteed to stand 700 lb. pressure, to be non-kinkable, to give one year's service and to be free from defects in material and workmanship. —Voorhees Rubber Mfg. Co., Jersey City, N. J.

New System for Reclaiming Crankcase Oil

**Heavy Unburned Fuel Ends Are Distilled Out—
Solid Foreign Matter Removed by Precipitation**

A SATISFACTORY method of reclaiming crankcase oil would result in substantial economies in car, truck and tractor operation. With the comparatively heavy fuels now being consumed, the oil in the crankcase becomes diluted with the heavy unburned ends of the fuel. This dilution not only reduces the viscosity of the oil to such an extent that it is no longer a lubricant, but also results in an actual loss of power. Furthermore the wear on the working parts is greater, which results in increased contamination of the oil with solid particles. The result is that it is necessary to change the oil very frequently in order to avoid these difficulties.

A method of salvaging this diluted oil for further use has been developed by S. F. Bowser & Co., Inc., Fort Wayne, Ind. The equipment is suitable for the use of public garages, fleet owners and taxicab companies. The illustration shows the layout of the apparatus diagrammatically.

Two Operations Involved

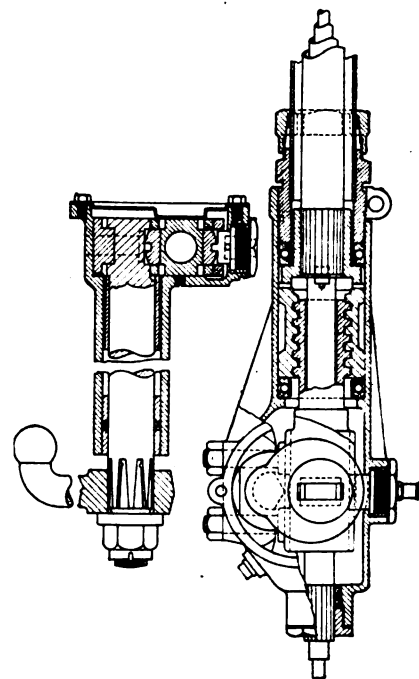
In the reclamation of the used oil there are two separate operations which must be performed in order to restore the original viscosity, fire and flash points. First, it is necessary to eliminate the dilution, and, second, all harmful solid foreign matter in the oil must be removed. The gasoline is driven out

of the oil by the action of the steam operating on the same principle as in a still. The foreign solid matter is removed by precipitation, a coagulant being added to hasten the process. The total cost of operating the reclaimer, including labor and steam, is said to be approximately 5 cents per gallon.

The system illustrated is manufactured in 50 and 100-gallon sizes. In the smaller size, the clean and dirty oil tanks have a capacity of 65 gallons, and in the larger size the individual capacity of these tanks is 170 gallons. A 500-gallon size is also manufactured.

New Ross Steering Gear for Passenger Cars

A PASSENGER car steering gear of similar design to models produced heretofore for truck applications only is now being manufactured by the Ross Gear and Tool Co. In the new design the connection between the steering tube and the nut is a four-jaw connection without brazing. The screw threads are turned on one end of a forging on the other end of which there is a rectangular opening. In this opening a rectangular piece of steel is inserted, which projects far enough on either side of the screw to engage rectangular openings in two swivels, one of which operates on either side of the screw forging. The rectangular openings in

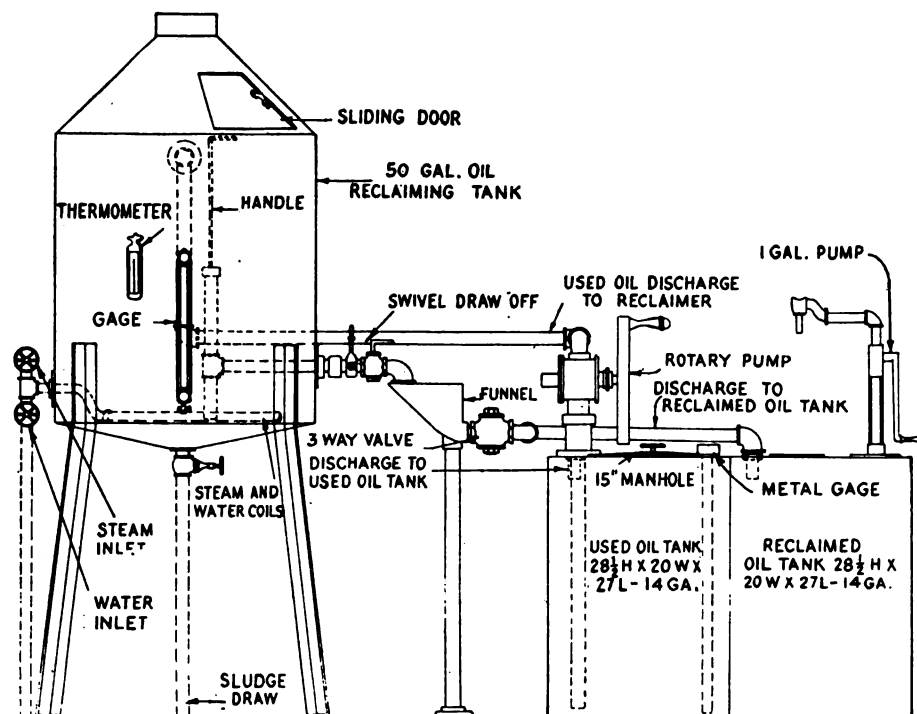


Sectional view of new Ross steering gear for passenger cars

the swivels are long enough to permit the swivels to move transversely with the center line of the steering column. These swivels operate in two circular openings which are machined in two fingers projecting from the trunnion shaft. The distance between the center line of the openings in the fingers and the center line of the trunnion shaft is 15/16 in. The resulting action when the nut is turned by turning the steering wheel is that the screw moves up or down with the rotation of the nut. In so doing it carries along the rectangular block, which in turn carries the swivels, and rotates the trunnion shaft. The rotation of the trunnion shaft moves the steering arm forward or backward.

The advantages of this type of steering gear lie in the large bearing surfaces between the various operating parts. Large bearing surfaces tend toward safety, reliability and easy steering, as well as toward a reduction of wear on the threads. The new design is 2 in. wide at its lower part and the upper part of the housing, which also contains the ball thrust bearings, is only 2½ in. in outside diameter. This narrowness facilitates installation of the gear in passenger cars.

Ball thrust bearings are provided to take the end thrust of the nut in both directions. The trunnion shaft is 1¼ in. in diameter and the steering arm is secured to the trunnion shaft by means of six taper splines.



Diagrammatic layout of Bowser apparatus for reclaiming crankcase oil by distillation and precipitation

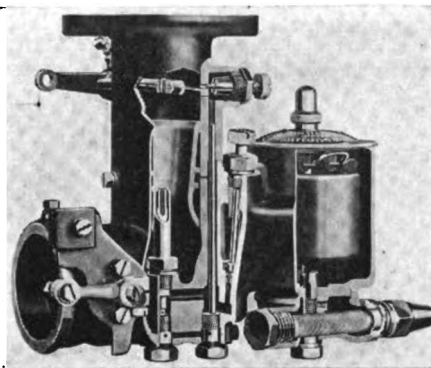
New Holley Plain Tube Carbureter

A NEW Holley carbureter of simple design and incorporating a number of features of interest is now in production. It has no moving parts such as air valves, needles, dash pots, etc., it being of the plain tube class and having but one master spray nozzle which affects the flow of fuel for both idling and running with wide open throttle.

Two holes located above and below the throttle plate give this control. On idling, the upper hole only supplies the mixture, the lower one acting as an air bleeder. As the throttle is opened slightly, the bleeder action is reduced, thus maintaining the mixture proportions. On further opening, both holes are exposed to the suction above the throttle and both act as fuel outlets to supply the extra gasoline made necessary by the larger volume of air passing the throttle.

U-Tube Principle

In addition to the incorporation of this principle, a great many interesting details are found on the new Holley carbureter. All of the screws are made of nickel steel to resist rust and also to make it impossible to twist off screws which are depended upon to hold permanent adjustments. No tools are necessary for removing the cover of the float chamber, which is held in place by a spring lock, acting in very much the same manner as a bayonet lock, except that it is continually under tension. Another very noteworthy feature is the strainer, which may be easily disassembled and cleaned without removing the gasoline connection or in any way disturbing the installation of the carbureter. The strainer is cylindrical in form and pulls out at the end opposite the gasoline intake, as shown in the phantom view of the carbureter. The dirt is left on the inside of the screen, since the gasoline passes from the inside to the outside in entering the float chamber. When removing the strainer, therefore, all of the dirt is removed with it and the accumulation can be entirely cleaned out, leaving the gasoline line free



Sectional view of the new Holley carbureter

of any deposits which may have entered during the course of operation.

As pointed out above, there is one master nozzle which affects the flow of fuel for both idling and running with wide open throttle. This master nozzle is adjusted by means of a needle valve and in its effect upon wide open throttle has a major influence. The idle has an additional adjustment, as shown directly below the flange, which is used for extreme low speed. When driving at the lower speeds, with partially closed throttle, there is an accumulation of fuel in the well, and upon opening the throttle, this accumulation becomes immediately available as a means of enriching the mixture for maximum rate of acceleration. It will be noticed that there are no passages leading to the atmosphere, for it has been found that such passages, when small, become filled with dust and dirt, and materially interfere with the accurate functioning of the carbureter. The further advantage of placing these passages so that they take air from within the carbureter itself lies in the

fact that in place of drawing cold air, warm air is supplied, taken from the main carbureter entrance, which with present day fuel, is always connected to a suitable stove or heater.

The carbureter is universal in its installation scheme inasmuch as it is possible to swing the strainer and gasoline inlet connection around to any point below the float chamber and also the choke connection can be set to be controlled from either side, or from any direction. The carbureter may be readily cleaned by removing the nozzle from the bottom and these are so designed as not to require gaskets. These features give a very accessible layout and permit installations on any type of engine. The carbureter is at present being manufactured in 1 in., 1½ in. and 1¾ in., top outlet, and a series of side outlet carbureters will soon be in production.

DURANT CHIEFS GATHER TO DISCUSS POLICIES

NEW YORK, July 22—Chiefs of the various divisions of Durant Motors met here this week for conferences with Durant on questions of general policy. Attending the meeting are T. W. Warner, Edward Verlinden, who will have charge of the main Durant plant at Lansing, and D. A. Burke, who developed the Sheridan. Preparations are being made to get into production in the eastern territory by Aug. 1.

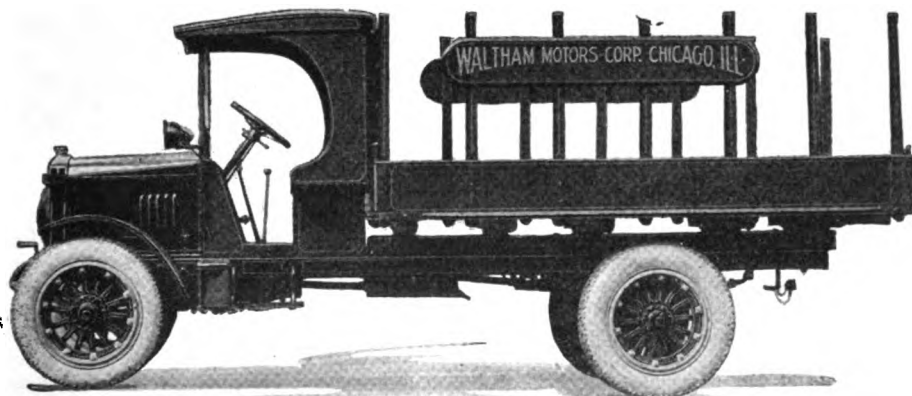
Rapid progress is being made in building up a dealer organization, particularly in the East, where the work is under the direction of M. D. Leahey. Dealer relations are being established in the central territory by Verlinden and on the west coast by E. M. Stevens, general sales manager for Durant Motors of California.

Waltham 1½ Tonner Sells for \$2,350

THE Waltham 1½ ton model is an assembled truck selling at \$2,350. It is manufactured by the Waltham Motors

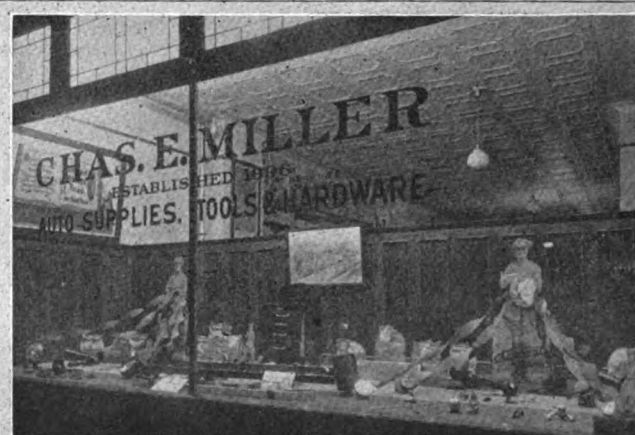
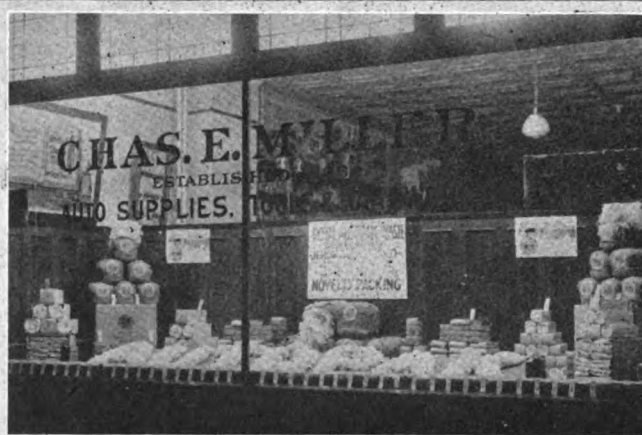
Corp., Inc., Chicago. The engine is a 4-cylinder Buda with cylinder dimensions of 3¼ x 5¼ in. It is equipped with Zenith carbureter, high tension magneto and Pierce Governor. The clutch is of the dry plate, multiple disk type, and the gearset, which is mounted as a unit with the engine, provides three speeds forward. The rear axle is a Sheldon worm type with a reduction of 7.8 to 1.

The standard tire equipment is Firestone solid rubber, 36 x 3¼ in. front and 36 x 5 in. rear. Pneumatic tires and power tire pump are furnished at additional cost. The wheelbase is 140 in., and loading space 10 feet. Regular equipment includes driver's cab, two side- and one taillight, toolbox and tools, and horn. The chassis is painted a Navy gray. The manufacturer will install electric starting and lighting at additional cost.



The 1½-ton Waltham is assembled of well-known standard parts

Featuring One Product Each Week



MANY automotive jobbers and dealers have found that a window campaign featuring a certain product or group of products each week carries strong sales stimulation.

A good example of this kind of window display activity is to be found in the campaign now being conducted by Charles E. Miller, wholesale and retail dealer in automotive equipment, at 231 West Fifty-fourth Street, New York.

Miller's campaign has run several weeks and is still attracting considerable attention even on New York's Motor Row where exceptionally fine displays are numerous.

In order to get the message to the public strongly in making these special displays, it is desirable to give them enough of an educational nature to attract the attention of the greatest number of persons. In some instances it will be

possible, undoubtedly, to get the assistance of manufacturers of some of the items to be shown in the nature of raw materials and specimens of the products in various steps of manufacture.

When such a campaign is contemplated it is well to map it out a few weeks in advance, selecting the items to be featured and arranging for the signs, special factory cutouts, etc. The selling power of such displays often is enhanced by

Makes a Strong Window Campaign



concentrating, in newspaper advertising, on the product shown in the window, calling attention to the window, and under some conditions by backing up this with sales letters on the same subjects.

These special displays should not occupy the window after they cease to attract attention—and under most conditions it has been found that they have been most effective when changed once a week.

This method of trimming windows with products that are to be particularly pushed recommends itself particularly to jobbers, as it not only helps create the demand for the product in the territory surrounding the jobber's establishment, but pictures of the window may be made and sent to dealers as a means of educating and inspiring the dealers to make similar displays in their windows.

This idea of special attention to single products or single groups of products also

lends itself readily to seasonable treatment. Along in the spring and summer windows may be profitably devoted to a few items each week that appeal particularly to the motor tourist. Such displays may be varied by grouping half a dozen good summer accessories one week and featuring just one of these another.

Why not study the pictures of the Charles E. Miller windows, and then plan a campaign of your own?

SYSTEM IN BUSINESS

This Department Is Intended to Assist Motor World Readers in Working Out Their System Problems — It Will Answer Questions Concerning System and Accounting

Entering Used Car Sales

Recording a Trade-In When New Car Is Not to Be Delivered for Several Months—Importance of Keeping Costs on Each Used Car Handled

EDITOR Motor World: One of my salesmen sells a new car for \$1,300 and accepts a used car in trade at \$650. In order to put the used car in salable condition it is necessary to send it to the service station, the cost of overhauling being \$68. The demonstrator works five days to sell the car and finally disposes of it for \$650. How do we show the profit on this sale which was made in December but the new car was not delivered until March? We use the Motor World System of Simplified Accounting. —A. B. M.

Answer.—On Form 1 there is a column for entering car sales and on Form 2 a column for car sales expense. It makes no difference whether new or used cars are sold, all of them should come under this department of the business. The income from this department is from the sale of cars and the expense would consist of the following items for the average dealer: Wages, supplies, cost of demonstrator, entertainment, free service, advertising, cost of rebuilding used cars, advertising, and any other division that is too large to be included under a miscellaneous heading.

A customer buys a new car for \$1,300 which you agree to deliver in March. You agree to take his old car in at \$650 and he agrees to pay you the balance on the delivery of the new car. When the sale is consummated and the used car received, your car stock is charged with its value. The customer is credited with this amount because the car does not actually become your property until the delivery of the new car. In making up the monthly statement it would be advisable to show this as a separate account rather than lumping it in the accounts payable, because it is a contingent debt.

The service department overhauls the car, the expense of \$68 being divided on the following assumed basis: Labor, \$50; material, \$18. The service department is credited with a sale of \$50 and the parts department with a sale of \$18. The cor-

rect way of charging this expense is a debatable point. Probably most dealers would charge it to car sales expense directly. On the other hand, the value of the used car has been increased by \$68, so it might reasonably be charged to car stock account. In this particular case the used car was sold for \$650, so you lost \$68 on the transaction. It is very clear that the allowance on the used car was too great. It may have been necessary to make this allowance to close the deal, but when you make trades of this character you are really cutting prices.

This may seem like splitting hairs, as the net profits of the business would be the same regardless of which place the repair expense was charged. But it is important for you to know just what the total cost of each used car handled is. In no other way can you judge the soundness of your trade-in policy.

Trouble will be avoided in entering transactions of this character if they are handled as straight sales. When you sell the old car, it goes on Form 1 as a cash or charge transaction credited to Car Sales. When the new car is delivered, cash is charged with \$650, your debt of \$650 for the used car is wiped out by a debit for this amount, and car sales is credited with \$1,300 for the new car sale. Assuming that the new car cost \$1,000, the income and expense accounts in this department would be as follows:

Income:		
Sale of cars.....	\$ 650	
	1,300	\$1,950
Expense:		
Cost of cars sold..	\$ 650	
	1,000	
Cost of repairs....	68	1,718
Profit		\$ 232

Is Interest on Investment a Factor in the Cost of Truck Operation?

IT is quite common to include in the costs of motor truck transportation a charge covering the interest on the investment. In the opinion of Earl S. Clark, expert accountant, as expressed in an address before the Motor Truck Association of America, there is no logical justification for this method of computing truck operating costs.

He said: "When you charge interest on your investment into your costs, what are you going to credit? You can't charge something into your cost unless you credit something else with it. In other words, it is like taking a dime out of this coat pocket and placing it in another coat pocket.

"You have got to establish a reserve on the credit side of the balance sheet for the same amount that you charged in your costs, because the inflating of

your costs by the amount that you put into the costs, represented by that 6 or 8 per cent, or whatever it may be, will reduce the net revenue. Say the ordinary revenue is 7 per cent, it will reduce it to 1 per cent approximately.

"If you go out on the market to-day and buy a \$6,000 bond—a 7 per cent bond—you expect to receive 7 per cent. Likewise, if you invest the \$6,000 in a plant under ordinary dividend rates at 7 per cent, the conditions are the same, and you expect to receive 7 and not 1 per cent."

This is a point that the truck dealer may well consider because he is faced with the necessity of showing the economy of motor truck transportation. In Clark's opinion it is a mistake to inflate the cost figures by including interest on investment.

Optimism of the North Dakota Dealer Is Inspiring

Although Buying Power of the State Is at Low Ebb He Is Carrying On and Has Confidence in the Future of the Industry in His State

By DAVID BEECROFT

MOTOR car, truck and tractor dealers in North Dakota are furnishing the entire industry an inspiring example of optimism and faith in the industry they represent these days.

The North Dakota farmer is sore at things in general and at the high prices of farm machinery and the low price of his wheat and other products particu-

and seeding at Fargo to stimulate tractor sales in a territory which this year has hovered unmercifully near the zero mark. Instead of coming ten or twenty thousand strong, scarcely 1000 farmers were attracted.

The North Dakota farmer just would not burn gasoline and wear out tires to motor to Fargo and witness 40 tractors and 11 horse outfits demonstrate. He

get through until August 1, when he will know what his crops will be and whether he can run his car or not.

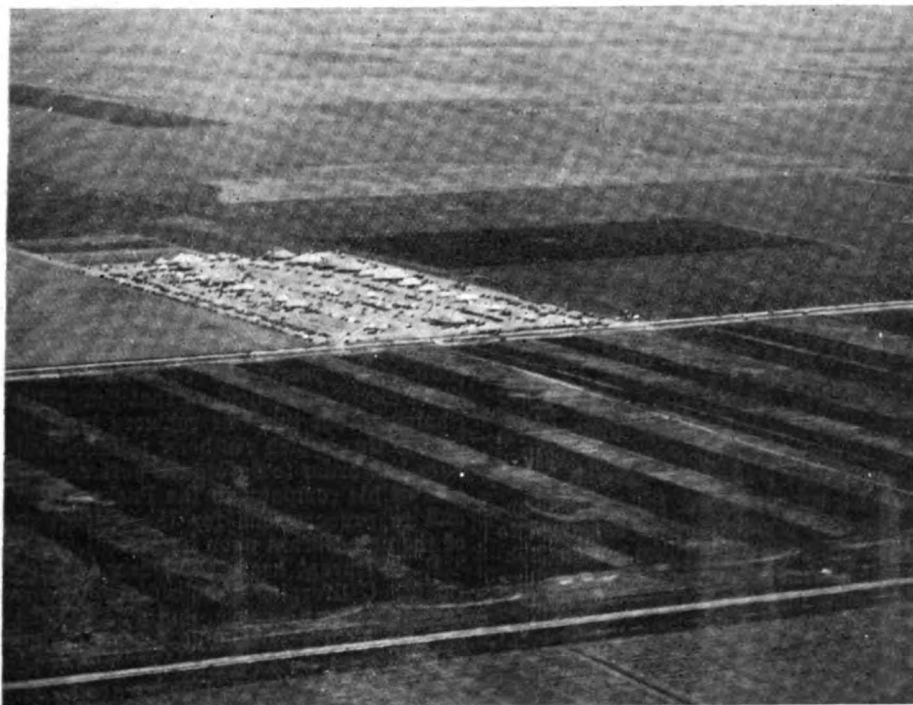
Last fall, his friends in the Non-Partisan League urged him not to sell wheat when he could have gotten \$2 or more a bushel and now he is selling it at \$1.25 to \$1.40. Eggs are the cheapest ever now; oats are cheap and in fact everything on the farmer's side is at rock bottom and everything he has to buy is high. He has contributed perhaps \$100 to the United Consumers stores in Non-Partisan League activities that are now in receivership. He has contributed to the support of 50 or more weekly papers the Non-Partisan League owns which are going into receivership nearly every week, three having gone last week. Perhaps he has money in some of the 50 banks that closed a month ago and are still closed, but many of which may open. Perhaps he has had money in some of the co-operative packing concerns that are closed because of poor management. Worst of all, he may have his farm in the worst part of the State "West of Missouri," as they describe it, where there has not been a good crop since 1916 and where all are hoping and praying for rain and cool weather so as not to spoil the good prospects of a crop this year.

Such a territory, naturally, is not a particularly congenial place for a motor car dealer, salesman or garageman.

And yet, across the 350 miles of North Dakota, garagemen and dealers are to be found in every town with 1000 or more who are still in business, still hopeful and best of all still as confident in the industry, still stout believers in the stability of the State, still making some money and optimistic as to the future. Most of these dealers have the spirit that wins. Some in the western part of the State have come through a literal baptismal fire in the last five years. They are emerging stronger and bigger because of their experience. Not all of North Dakota has had crop failures since 1916. Only the west end from Minot two-thirds across the State to the Montana line and from North to South 200 miles. The central part of

(Continued on page 40)

At the Fargo Tractor Demonstration



Here's an interesting airplane picture of the demonstration field at Fargo where 26 national manufacturers participated in a three-day plowing and seeding demonstration late in June. The dark strips are the plowed portions of the field

larly. Nothing could better exemplify the temper of this North Dakota farmer than his attitude toward the tractor demonstrations the last week of June in which 26 national manufacturers staged a three day demonstration of plowing

would not spend money for railroad fare for he has little to spend. He is not buying tractors. He is buying very few cars. He is running his motor car without an extra tire and oftentimes has to put one casing over another in order to

Durant Not Considering Mergers

OFFICIAL STATEMENT QUIETS MANY RUMORS

Will Form No Entangling Alliances—Not Seeking Monopoly of Industry

NEW YORK, July 20—Most of the innumerable rumors about the ultimate plans of W. C. Durant are set at rest by the definite outline of policy contained in a statement which will be mailed this week to stockholders of Durant Motors, Inc., outlining the progress made thus far in developing the enterprise. In this connection the statement says:

"Durant Motors, Inc., was not organized for the purpose of monopolizing the motor car industry or effecting a combination, merger or consolidation of existing companies in either motor car or accessory lines, and, regardless of rumors to the contrary, will consider no combination, mergers or entangling alliances with any firm or corporation identified with the production of automobiles at this or any future time.

"Durant Motors, Inc., was organized to build a line of popular priced motor cars designed by Mr. Durant, the business owned by Mr. Durant and his close associates, with no partner other than the investing public."

Ends Alarming Stories

This disposes of the popular belief that Durant is building up his new enterprise with a view to selling out to the General Motors Corp. when it is built up to the right proportions. It also settles the report that he has acquired a very substantial interest in the Studebaker Corp. in the expectation of merging that company with his.

It can be stated, however, that the proceeds of sales of Durant stock are working and earning dividends. In fact, it is understood that the investments made have been so profitable that it would be possible at this time to pay a dividend on all Durant Motors stock which has been sold.

In addition to these statements in regard to policy, the letter to the stockholders says:

"Since its organization in January, 1921, three companies have been incorporated and are being independently financed to assemble the Durant line of popular-priced cars. These companies are

"Durant Motor Co. of New York.

"Durant Motor Co. of Michigan.

"Durant Motor Co. of California.

"Each of these companies, with respect to policy, product, operating and
(Continued on page 36)

"INVENTS" GASOLINE SUBSTITUTE, NOW HE'S IN JAIL

NEW YORK, July 20—Stanislaw C. Papp, chemist, who in May 1920, announced he had discovered that the juice of corn stalks plus a little sugar could be made into a substitute for gasoline in the operation of automobiles, yesterday was sentenced to from two and a half to five years in Sing Sing when arraigned before Judge McIntyre.

He had pleaded guilty to six indictments charging him with posing as "Professor F. John Chassler" when he induced many poor Hungarians and others to purchase stock in the Fermogas Company, a \$1,000,000 corporation, which he organized after he had given several fraudulent demonstrations of his "discovery" to army officers, bankers and capitalists in Ramsey, N. J.

He maintained a "laboratory" at his home in Brooklyn. He gave a demonstration of his "product," but it was found later that the "professor" had a pipe running to the vat containing the ingredients for the gasoline, a substitute which pumped perfectly good gasoline into the automobile in which he gave the demonstration.

ANTHONY WILL HANDLE DURANT CAR ON COAST

Packard Distributor for 16 Years Gets New Product for Pacific Trade

SAN FRANCISCO, July 25—First announcement regarding marketing of the new Durant car in California is released by R. C. Durant, of the Durant Motor Co., with the news that Earle C. Anthony, Inc., for sixteen years Packard distributors in this State, will handle the Durant at the four most important distributing points in California—San Francisco, Oakland, Sacramento and Los Angeles. In all of these places the Anthony organization has branches.

A Striking Alliance

At the same time, Mr. Anthony announced that George R. Bury, who, until July 1, 1921, had been general sales manager of the Packard Motor Car Co., had been appointed vice-president and assistant general manager of Earle C. Anthony, Inc., and will devote all his efforts to northern California territory. Bury had been more than fourteen years with the Packard company. The arrangement between the Durant company and the Anthony firm marks an alliance between America's newest car and one of California's oldest and strongest automobile concerns. The founder and president of the distributing company is Earle C. Anthony, a pioneer in the motor car business in this State, having entered the business in Los Angeles in 1904. In 1905 he became Packard distributor for southern California, acquiring the whole State for that line four years ago. More than eight years ago he entered the State distributing field, at that time with Chalmers, but this was replaced in 1915 by the Reo, which Anthony relinquished July 1 in order to devote the entire energies of his company to the Packard line and to preparations for the marketing of the new Durant upon its arrival.

R. C. Durant heads the Durant Motor Co. of California, a subsidiary of the eastern parent concern, and a \$3,000,000 factory in Oakland will be producing Durant cars by December of this year. Associated with R. C. Durant are C. M. Steves, A. L. Warmington, George R. Scott, H. T. McKnight and Charles H. Durham.

After the Mechanics

KANSAS CITY, MO., July 25—A new annoyance has arisen for motor car and truck dealers, interfering seriously with service to customers by the mechanical departments, in the arrest of mechanics for failing to possess chauffeurs' licenses.

GOODYEAR AND FIRESTONE INCREASE DAILY OUTPUT

AKRON, July 25—The Goodyear Tire & Rubber Co. is preparing to increase production to 25,000 tires and 30,000 tubes a day. Considerable difficulty is being experienced in obtaining skilled tire builders.

The Firestone Tire & Rubber Co. announces that production will be raised to 23,000 tires and 25,000 tubes a day. Substantial increases are reported in orders, both from manufacturers and dealers throughout the country.

**Automotive
Equipment
Sales Promotion
Week
Aug. 6-13**

SHERMAN WILL DIRECT A. E. A. SALES CAMPAIGN

Executive Editor of Motor World Resigns to Head Promotion Plan

NEW YORK, July 24—Ray W. Sherman, for more than nine years a member of the Motor World editorial staff, for several years as editor and more recently as executive editor of Motor World and the other Class Journal papers, has resigned to become merchandising director of the Automotive Equipment Association.

Mr. Sherman will take up his new work Aug. 1 organizing and directing the sales promotion movement authorized at the recent Mackinac Island convention of the A. E. A. His office will be at association headquarters, 1818 City Hall Square Building, Chicago, where he will work with the sales promotion committee headed by Robert A. Stranahan, president of the association.

Mr. Sherman has been one of the dominant factors in the upbuilding of Motor World as a business paper devoted to the interests of dealers, jobbers and garagemen. He has traveled extensively, making a large number of firm friends in all branches of the industry and writing a great many articles on merchandising topics.

Before joining Motor World Mr. Sherman spent several years in daily newspaper work and for a time was in the advertising department of the Franklin Automobile Co. He was graduated from Syracuse University in 1907.

The new work which Mr. Sherman will undertake, with a staff of assistants, is virtually an educational campaign intended to carry a practical message of better merchandising to all branches of the automotive equipment trade. It will call for the cooperation of manufacturers, jobbers and dealers in plans yet to be worked out in detail.

MOTOR DEALERS NOT BIG LOSERS IN CLOSED BANK

CHICAGO, July 25—The best information available shows that Chicago automobile dealers who were depositors in the closed Michigan Avenue Trust Co. will not be heavy losers, as their accounts in most cases were small and represented balances carried to meet payrolls. As a consequence motor row is not much concerned.

The Chicago Clearing House Committee has issued a statement advising the public that the closing of the bank has no bearing upon general banking conditions, which are sound. Auditors now at work expect to have a statement ready in a few days. The troubles of the bank date back to a deal with the Graff Mfg. Co., which obtained a loan of \$250,000 on the strength of a contract with the Packard Motor Car Co. of New York which later was cancelled.



RAY W. SHERMAN

Who Has Been Appointed Merchandising Director of the Automotive Equipment Association

INSURANCE RATES ARE TOPIC AT CONFERENCE

DETROIT, July 25—Safety first measures and the enactment and enforcement of country-wide anti-theft laws were the subject of discussion by insurance and automobile executives representing the National Automobile Underwriters conference and the National Automobile Chamber of Commerce at a conference Thursday at the Detroit Athletic Club.

Great interest was shown in the new Michigan law which is aimed to safeguard ownership and prevent unlawful sales. J. S. Marvin, assistant general manager, National Automobile Chamber of Commerce, stated that the conference was called at the request of the insurance executives to discuss the dissatisfaction that has been expressed by automobile manufacturers with the rising cost of insurance to the public and the mechanical details involved in the grouping of cars for insurance rating purposes. It was felt that much good has been accomplished by a free discussion of the problem from both sides and a further meeting is planned after each interest has had time to consider the matter further. Reduction of thefts and accidents, however, seems to offer the best means of reducing insurance costs and rates and every effort will be made to that end.

Pueblo Relief Fund \$600

ST. LOUIS, July 25—The Pueblo relief fund of the National Automobile Dealers Association is now \$600. Des Moines, Detroit, Minneapolis and Newark dealer associations have contributed \$100 each. Atlantic City, Wheeling and Washington, D. C., have sent \$50 each, and Lacrosse, Wis., and Lancaster, Pa., have sent \$25.

JULY REGISTRATIONS ALMOST EQUAL JUNE

Counties in and Around New York Show Passenger Car Gains

NEW YORK, July 25—New passenger car registrations in July, practically equivalent to sales, in ten counties in and around New York are running almost up to the June figure, according to indications as the work of registration and compilation goes on at the motor vehicle offices.

This condition is due to continued heavy sales of four or five lines. Other lines show a falling off, which is normal for July, except when compared with years such as 1919 and 1920.

Several lines which had price reductions late in June or early in July had only a short-lived revival of sales as compared with the stimulation following reductions made in May or early June.

History has simply repeated itself in New York. The bulk of the motor car buying population bought before Independence Day in preparation for vacation trips which are now in progress. However, with so many people out of town, there is nothing approaching stagnation in retail sales and wholesale conditions are excellent, being buoyed up by purchasing at nearby resorts.

The official new car registration figure for June, just compiled by Sherlock & Arnold, publishers of the Automobile Sales Analysis, show that June was the banner month of the year, running 741 cars ahead of May. The figures for the year, to July 1, are:

	\$3,000 and up	Under \$3,000	Total
January	101	470	571
February	185	1383	1568
March	385	2919	3304
April	561	4749	5310
May	579	5458	6037
June	464	6292	6756

DUESENBERG CAR WINS GRAND PRIX IN FRANCE

(By Cable to Motor World)

PARIS, July 25—Driving a Duesenberg, one of the racing cars seen at Indianapolis, Jimmy Murphy captured this year's Grand Prix race at Le Mans to-day, covering the 321.78 miles course in four hours, seven minutes and eleven seconds. Murphy's average speed was 78.12 miles an hour. It was the first time an American car ever won the classic. The regulations called for a maximum piston displacement of 183 cubic inches and a minimum weight of 1763 pounds. Competing cars were Ballot, Talbot and Mathis.

Manufacturer, Not Jobber

In its report of the Automotive Equipment Association convention at Mackinac Island, Motor World in its issue of July 13 listed the Fraim-Slaymaker Hardware Co., Lancaster, Pa., as a jobber. This company manufactures locks and hardware.

PLAN REORGANIZATION FOR MERCER MOTORS

**Purchasers Found for \$500,-
000 First Mortgage Bonds
—Will Redesign Car**

NEW YORK, July 25—After months of laborious effort, the committees representing bank and merchandise creditors have evolved a satisfactory plan for the reorganization of the Mercer Motors Co. This plan has been accepted by the representatives of both classes of creditors.

As a preliminary it calls for an agreement with the officers and directors of Hare's Motors, the selling organization, for the cancellation of all contracts and options. The committees have expressed formally their appreciation of the helpful attitude of Hare's Motors, and it is recognized that general conditions rather than lack of ability on the part of the executives were responsible for the difficulties of Mercer.

Purchasers have been found for \$500,000 of first mortgage bonds, which will provide working capital, contingent upon the issuance of \$2,000,000 in sinking fund collateral notes bearing 7 per cent interest, which both bank and merchandise creditors would be expected to accept for 80 per cent of their claims. If the creditors agree to this proposal they will be paid 20 per cent of their claims on August 1, or as soon thereafter as possible, and an additional 5 per cent before December 31. The notes would be secured by the assets of the Simplex Automobile Co., Inc., and 50 per cent of the net earnings of the Mercer company would be paid over to a trustee for the benefit of creditors.

The purchasers on the bonds would insist upon the resignation of all the present officers and directors and the right to elect a new board, as well as a release from the contract with Hare's Motors.

It is proposed to redesign the Mercer car and get it on a commercial production basis of 30 cars a month this year and to double that output in 1922.

A letter will be sent this week to bank and merchandise creditors of the Locomobile Co., asking them for an extension of time, probably for six months, in the hope that by the end of that period some plan can be evolved for the reorganization. If the extension is granted it is believed this can be done.

Used Cars Moving Fast

KANSAS CITY, MO., July 25—Several used car sales during June, when special effort was made to move this class, resulted in unusually large volume. Most of these events were over by July, and the present month seems to be showing a diminution in the movement of used cars. The announcement of price reductions during May and June of several large-selling cars had effect on the movement of new cars in those months.

CITY'S "FLOORWALKER" GREET'S CAR BUYERS IN SOUTH

BIRMINGHAM, ALA., July 25—Sam Bordorph, partner in the firm of Scholder Tire Co., has been appointed official "floorwalker" of Automobile Row. It is his business to take care of automobile owners who are not familiar with the locations and accommodations on Automobile Row, the four block section of garages and automobile dealers' places.

There are thousands of automobile owners who, when they need something, go to Mr. Bordorph. He, in turn, takes them to the Scholder company, and if it cannot be found there he escorts them to all of the other shops, never leaving them until they are "Sold and Satisfied," as he expresses it. He usually sells them himself.

DURANT MOTORS NOT TO FORM ANY ALLIANCES

(Continued from page 34)

sales, will be controlled by Durant Motors, Inc. The parent company will be responsible for and assume all engineering expenses in addition to providing proper and dependable sources of material supply. For this service and the use of patents, inventions, name, etc., Durant Motors, Inc., is to receive a major participation in the profits.

"Durant Motor Co. of New York, capitalized at \$3,000,000, will assemble the Durant car at Long Island City for distribution in the Atlantic Coast territory and export markets. The plant has a capacity of 25,000 cars a year and will be in production next month. Mr. F. W. Hohensee, president and general manager of the company, was formerly in charge of the operation of the entire group of Chevrolet factories.

"Durant Motors Co. of Michigan, capitalized at \$5,000,000, with headquarters at Lansing, Mich., is building in that city a modern plant with a capacity of 40,000 cars a year. The building contract specifies completion by November 1 next. Mr. E. Verlinden, who has been responsible for the development of the splendid business of the Olds Motor Works, is president and general manager of the Michigan company, which will assemble and distribute the Durant car in the territory between the Adirondacks and Rocky Mountains.

"Durant Motor Co. of California, capitalized at \$3,000,000, has secured an excellent location at Oakland, Cal., and plans are now being drawn for a modern plant having a capacity of 20,000 cars a year. Construction work will go forward on a schedule to per-

SALES SHOW INCREASE IN LOUISVILLE FIELD

**Dealers Say Demand Is Greater
Than for Some Time in
Kentucky**

LOUISVILLE, July 25—As the season progresses, automobile sales are increasing rather than falling off, according to opinions of leading automobile dealers here.

Outstanding facts seem to be as follows:

The number of new purchasers of new cars is steadily increasing. That is, the number of persons buying cars who have never owned cars and have not, in consequence, any "trade-ins" is increasing. This is particularly encouraging to the dealers, since the main end of the business must always be the sale of new cars. Price reductions, which have been made on practically every make of automobile sold in Louisville, have stabilized the market and created a new demand for automobiles.

On high-priced cars, business, while apparently slow, is shown to be normal for this season of the year by a comparison with the last five years. The reason this class of cars moves slower now than during the spring and fall seasons is that purchasers of high-priced cars are away from the city during practically all of the summer.

Dealers are all optimistic over the future prospects. None of them have reported any dearth of business.

mit automobile production in March, 1922. Mr. R. Clifford Durant, who until recently was at the head of the Chevrolet Motor Co. of California, is president and general manager of this company, which will assemble the new Durant car for distribution in the Pacific Coast territory.

"In addition to the above—

"Durant Motors, Inc., will on August 1, 1921, come into possession of the splendid plant in Muncie, Ind., now being operated by the Sheridan Motor Car Co. division of General Motors Corp. A new company, to be known as Durant Motor Co. of Indiana, capitalized at \$3,000,000, will be organized for the purpose of manufacturing at Muncie an exclusive six-cylinder car to sell at a popular price. Mr. D. A. Burke, formerly manager of the Chicago branch of the Buick Motor Co., will, as president and general manager, direct the affairs of the new operating company."

When Durant comes into possession of the Sheridan plant the name of the car will be changed to the "Durant Six." The Sheridan is now powered with the same motor used in the Chevrolet, but when Durant takes it over he will use a six-cylinder motor which will be identical otherwise with the four-cylinder which will be used in the "Durant Four."

EQUIPMENT BUSINESS GOOD, OFFICIALS SAY

Champion Spark Plug President Declares Sales Now Equal 1920 Total

TOLEDO, July 25—At the meeting of all the salesmen of the Champion Spark Plug Co., held here this week, it was shown to them that while the automotive equipment industry is running at good speed now, a greater market must be developed for the future.

President R. A. Stranahan, addressing the salesmen at their dinner, declared that his company was up to last year's business at the present time, but that it had to increase or fall by the wayside.

"We must get our actual business nearer to our potential," he said. "If every dealer in the country would sell \$10 worth of equipment a year to each motorist that would increase the business of the country by \$100,000,000 annually.

"Each could get his share without taking any business away from competitors. It means that we could expand our business greatly.

"In regard to automobile spark plugs, it is reasonably to be expected that with more than 16 per cent increase in registrations this year, we ought to be able to boost sales 10 to 15 per cent without disturbing competition in the least."

Sales Director Talks

Among the speakers at the meeting were F. B. Caswell, sales director, who looks to an immense purchasing power to be released this fall when crops are harvested and marketed, and Harry G. Moock, manager of the National Automobile Dealers Association, who said the time had come to "stop kidding ourselves."

"We are past the 'game' stage in the automobile business," he declared. "We must win the respect and confidence of the buying public that we are a permanent industry dealing in a commodity which is long past the luxury stage.

"The legislators have tried to hang this tail of luxury onto us, but the power of votes back home has told them they can't do it. There is a silent partner now taking out 35 per cent of the revenue of the industry. It is all right to pay our fair share of taxation, but we have been so busy running our own businesses that we have sent men to Washington and put in their hands the power to destroy us without so much as looking over their qualifications.

"We do not know whether our taxes will be increased or decreased. We want justice in that line, and it is to our interest to be unified in our demand.

"Legislation always has to be watched. Just now we are trying to put across the Townsend Bill. It must go over or there will be no

MOTOR TRAFFIC SO GREAT, STATE WILL WIDEN ROADS

HARRISBURG, PA., July 25—Preliminary studies of projects for increasing the width of main state highways entering the larger cities of Pennsylvania so that they may be ultimately extended to 100 or 120 feet are under way by State Highway Department engineers. The rapid increase in motor traffic has made it imperative to create future building lines. Studies nearest Philadelphia have been in Delaware, Bucks and Montgomery counties and in the Main Line district.

more Federal aid for highways. It is to remove the pork barrel methods. We have spent millions for highways, but in Indiana, for instance, there is only one mile of Federal aid road.

"Traffic in city and country does concern you men and dealers, because people who have to ride over rough and muddy roads will not buy cars.

"Time was never so bad that business couldn't be had. Every man is potentially an automobile owner. Let's do some real merchandising, departmentalizing, specializing and economizing."

The salesmen were here for a four-day session. Among those who spoke at the banquet were R. A. Lydy, London, and Raoul Armand, Paris. They both said conditions were better in Europe, and that business was on the gain.

Elgin Has Record Shipment

ARGO, ILL., July 25—The Elgin Motor Car Corp. has informed its dealers that the number of cars shipped for the month of June was 102 per cent larger than for any other month in the past seven. Orders on hand June 1 were 259 per cent larger than for any time in seven months and orders received 305 per cent greater.

WILLYS WILL CUT BANK LOAN INDEBTEDNESS

Company to Make "Substantial Payment" Aug. 1—No Further Price Cuts

TOLEDO, July 25—That the Willys-Overland Co. would make a substantial payment toward the retirement of its bank loans was the statement made here by President John N. Willys upon his arrival for a few days' consultation with factory officials. He said that no further cuts in price would be made.

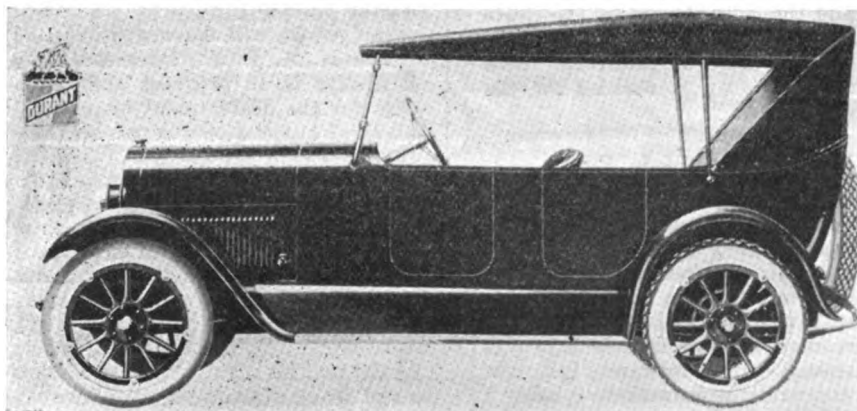
"Willys-Overland at the present time has over \$10,000,000 cash on hand and will make a very substantial payment on August 1 on its outstanding bank obligations," said Willys. "The entire outstanding bank obligations of Willys-Overland are approximately \$20,000,000 at this time, and Willys-Overland assets of \$125,000,000 are employed to better advantage right now than they have been for a long time.

"I have been asked several times lately about the future price situation. So far as we are concerned, it is very simply answered; there have been one or two so-called second cuts on certain automobiles which in reality were just a slight trimming down of prices. When we decided to reduce our price we went all the way. The present price of \$695 on Overland is a reduction of approximately 33 per cent. We made this reduction because we wanted to get the benefit of big volume business, and we are getting it.

"I am confident that the financial interests of the country will continue to do their best to support legitimate, hard-working dealers in maintaining the proper stock of automobiles, and I know the dealers who have automobiles on hand can sell them and are selling them.

"I believe, however, that a complete revolution in the method of selling automobiles is in progress. Dealers and distributors are conducting their business on sounder lines. They are systematically going after business and watching their costs in a way they never did before."

New Durant Car and Nameplate



Durant Four, which will sell for \$890 and will be on market about Aug. 1, now on display in Long Island City

JULY SALES IN OREGON WILL SURPASS JUNE

*Expect Double the Business
from Figures of First Two
Weeks of Month*

PORTLAND, ORE., July 25—Although sales of new automobiles throughout Oregon seemed disappointingly few during the month of June, as judged by the number of new cars registered with the Secretary of State, business was in reality good to excellent in practically all lines. The secret of the situation was that large numbers of purchasers in all parts of the State, who had ordered cars, waited until July 1 or later to take delivery. Under the State automobile license law the full year's fee must be paid for all licenses secured during the first six months, while on and after July 1 the fee is but half.

Registrations during the month of June, according to the figures from the office of Secretary of State, totaled 2115. This included 800 new passenger car licenses and 84 new truck licenses. The rest were seconds and transfers. This seemed to be but one-third normal, and indicated that Oregon had suffered a considerable slump in selling.

However, during the first week of July there was a total of 4200 registrations, or nearly twice as many for that one week as for the entire month of June. This situation will show July as an unusually heavy month and June as a lean one, although much of the business shown under July registrations was actually secured in June.

COAST OUTLOOK BRIGHT AS BUYING WAVE STARTS

SACRAMENTO, CAL., July 25—Indications for prosperity in the automobile business never were better than right now. There are, perhaps, not quite so many cars selling now as at the peak of the war sales period, but it was realized then that conditions could not last. The present buying wave shows no indication of receding, and there seems no good reason why it should.

The buying power of northern California and the central part of the State depends mainly upon agricultural conditions, for directly or indirectly there is where the money is derived for the purchase of cars.

Receiver for Toledo Firm

TOLEDO, July 25—On application of Willys-Overland, Inc., of Toledo, a temporary receiver has been appointed for the Overland-Houston Co., local distributors of Overland cars. An injunction has been issued restraining the officers of the company from interfering with the assets. Willys-Overland, Inc., the parent company, asserts that it holds a lien on the capital stock of the other concern, the assets of which are estimated at \$100,000.

Enclosed Car Week

By Harry G. Mook
Business Manager National Automobile
Dealers Association

Ask the man who owns an enclosed car and he will tell you that never again will he own an open car, although in the majority of cases he at first owned an open car.

There are literally thousands of open car owners who are right this minute thinking that this fall and winter will find them in the market for an enclosed car.

How best to forcibly bring it to the attention of those buyers, as well as others who can be convinced, that, although the weather is bad, motoring is still comfortable if the proper equipment is obtained, is the question.

The Fur Trade has made the purchasing of furs in August an annual event to such a degree that most everyone who contemplates buying furs goes into the market in the hottest season of the year, and gets merchandise for use months later.

We are certain when the so-called summer selling season is over, that there should not be any let-up in sales in the automotive industry, and especially is this true as it relates to the sale of ENCLOSED CARS, and of the equipment used with enclosed cars.

An entire week devoted entirely to active efforts in sales and advertising displays of the latest models, together with the co-operation of local wearing apparel merchants showing latest styles of fall and winter motoring habits, will result in, or create a demand and make sales beyond the expectation of the most optimistic.

There should be no let-up with the passing of the summer selling season this year. Business generally is on the up-grade, crops are harvested. Industrial plants resuming operation with more actual money in the country than ever before, let everyone in the industry make it as easy to buy fall and winter motor equipment as concerted effort will make possible.

The N. A. D. A., interested as it always is, in progress and success for the dealer industry, urges all local associations to get behind the movement for the ENCLOSED CAR WEEK in order that the fall and winter selling will be started off with a bang.

Tampa Dealers Reduce Gas

TAMPA, FLA., July 25—Retail dealers and Tampa users of gasoline have won a victory over wholesalers which will mean a continued sale of gasoline at 22 cents per gallon instead of 24 cents.

SAVANNAH BUSINESS SHOWS STEADY GAINS

*Material Increases Reported for
June Over Two Preceding
Months of Year*

SAVANNAH, July 25—Savannah retail automobile dealers have experienced a decided improvement in business during the last two months as compared with the first three or four months of the year. June sales and general automobile business showed material increases, as compared with the preceding months, as a result of the reduction in prices.

"However," says Percy S. Bacon, president of the local dealers' association, "the June sales are hardly better than the average monthly sales of last year. The first four months of this year were exceedingly bad for the dealers of this territory, but the recent improvement has given the dealers new hopes, and they are putting forth every effort to push sales forward."

Bacon explained that for the past two years the automobile business in Savannah has been greatly handicapped by the construction of concrete roads being in progress, which made long, boggy detours necessary. Since the completion of road and bridge work through this section, forming a direct route from the East, through Savannah and Brunswick into the State of Florida, the local dealers are expecting considerable improvement in business.

The outlook for the automobile business in this territory is favorable for materially improved conditions within the next twelve months, but no decided increases are expected before the first of the year.

DUESENBERG TO START DELIVERIES SEPT. 1

INDIANAPOLIS, July 25—Deliveries to dealers who have been established in all parts of the country will be begun Sept. 1 by the Duesenberg Automobile & Motor Co., Inc. Orders for more than 3000 cars, which will cost in excess of \$12,000,000, now are on the books.

Factory production will be in charge of A. W. King, formerly production manager for the Buick Motor Co. and the Northway Motors Co., who recently returned from France, where he reorganized the production system of the Berliet Company.

The sales organization is being perfected by Harry W. Anderson, who has served as sales manager for Stutz, Templar and the Buda Co.

Larrabee-Deyo Truck Cut

BINGHAMTON, N. Y., July 25—The Larrabee-Deyo Motor Truck Co., Inc., announces reductions of \$200 and \$300 on its models. The 2½-ton is cut from \$3,400 to \$3,200, the 3½-ton from \$4,200 to \$4,000, and the 5-ton from \$5,100 to \$4,800.

GENERAL BYNG TO OPEN CANADA'S MOTOR SHOW

Dominion's New Governor-General Who Introduced "Tanks" to Officiate

TORONTO, July 25—Canada's only National Motor Show will be opened in conjunction with the Canadian National Exhibition, Exhibition City, Toronto, by General Sir Julian Byng, August 27—the first official appearance of Canada's newly appointed Governor-General.

That he should open the big show is eminently suitable for it was under his command that that great automotive war machine, the "tank," first went into action so effectively and to the utter consternation of the Germans.

Space Oversubscribed

Space has never been so heavily oversubscribed, yet applications continue to pour in. As last year, the Transportation Building will be devoted exclusively to passenger cars. Following the example of the Automotive Industries of Canada (the N. A. C. C. of the Dominion) the Canadian Auxiliary of the Automotive Equipment Association have recognized the event as Canada's only National Motor Show and are giving it their active support. As a result of their efforts both demobilization armories have been given over to accessory and equipment displays and many manufacturers who have not exhibited here heretofore have been induced to take space.

The truck displays will be under "big top" canvas to the west of the Transportation Building and south of the armories.

Motorcycles and motor boats will be shown under the twenty thousand seating capacity grandstand while tractors will be under canvas with short demonstrating grounds provided. Airplanes will be shown in hangars and "in the air."

Huge Arena in 1922

Next year with the completion of the huge arena under construction the commodious Horticultural Building with its in posing dome will be rechristened the Truck and Automotive Equipment Building, and will afford excellent accommodation for the display of these branches of the industry.

August 27 and 29 will see the opening of the dirt track racing circuit with the meet on the "Ex" half mile oval. Approximately a score of drivers have applied for entry blanks. Last year some forty-odd thousand admissions were paid to this event. The Duke of Connaught, Henry Ford and Sir Thomas Lipton were among the spectators.

Some conception of the importance of the Canadian National Exhibition as a touring objective may be gleaned from the fact that one afternoon last year 13,000 cars bearing licenses of practically every State in the Union and Province in the Dominion, were parked within and around Exhibition City.

REPAIRSHOP ON WHEELS TAKEN BY STUDENTS TO YOSEMITE

BERKELEY, CAL., July 25—T. P. Stevick and Brooks Walker, students in the University of California, have equipped a 1914 Stutz with windlass and jacks, tools and repair parts for small cars, and taken to the road to go through the Yosemite as a traveling repair shop, making their headquarters on the troublesome Chowchilla grade, near Wawona. The scheme was suggested by Stevick having seen many motor tourists in trouble on these roads, and has proved profitable.

FIGURES FOR TRACTOR TEST ARE INDEFINITE

CHICAGO, July 25—Official figures on the Fargo, N. D., tractor demonstration, issued by the National Implement & Vehicle Association, are indefinite as records of tractor performance. There are no figures for individual tractors, nothing but averages being given and these covering only fuel consumption and time occupied in plowing 10-acre tracts assigned to each machine.

The average fuel consumption for the 25 tractors that burned kerosene in plowing 10 acres amounted to 3.01 gal. per acre. Kerosene was worth 11.8 cents per gallon at Fargo, so that the kerosene cost per acre was 35.518 cents. To this should be added gasoline, which was used by most of them in starting. Approximately .12 gal. of gasoline per acre was used, which at a cost of 23.1 cents per gallon gives a cost per acre of 2.772 cents for gasoline. Adding this to the kerosene cost gives an average of 38.29 cents per acre for fuel for the 25 kerosene-burning tractors.

The cost for the 11 tractors which burned gasoline showed that they used 2.77 gal. per acre in plowing, which at 23.1 cents per gallon gave a total cost of 63.987 cents per acre. It will be noted that the average amount of gasoline was less than kerosene, but the cost of gasoline being approximately double that of kerosene made the cost per acre approximately double.

Denver Exhibit August 10-12

DENVER, July 25—Denver Automobile Dealers Association will stage a free mid-summer exposition of automobiles, trucks and motor camping equipment at the Civic Center, August 10 to 12, the show running two days and three nights. The association will have complete charge of the exhibits and the expense of the exhibition will be borne by the Denver Post. The purpose of the show is to call attention to Denver's advantages as a supply station to tourists visiting the Rocky Mountain Parks.

PROSPECTS BRIGHTEN FOR MEXICAN HIGHWAY

American Delegates Optimistic After Conference With President Obregon

SAN ANTONIO, TEX., July 25—Prospects are bright for the improvement of the proposed Mexican highway from Laredo, Tex., to Mexico City, the capital of the Southern Republic, as an international extension of the Meridian Highway across the United States. This optimism was brought to San Antonio by delegates of the Meridian association, who have just returned here after a promotion trip along the proposed route. Conferences with local and state officials were held at each of the larger Mexican cities, and at Mexico City the delegates were in conference with President Obregon and Senor Faustino Reel, present head of the Mexican Department of Communications and Public Works.

Big National Projects

"We found the people of Mexico overcoming their difficulties with a smile," D. E. Colp, vice-president of the Meridian association and manager of the truck department of the Nash South Texas Motors Co. here, declared. "The country is fast returning to normal. The government has five big road projects under construction and it expects to keep building until the Republic has a good system of highways. The Mexicans realize what the tourist business means to any country, and they are correct in assuming this will be large if proper highways are built. President Obregon discussed the highway problem with us at length and told us that the government was caring for many of its people by giving them work on the highways."

"All the road work in Mexico is being done by hand, no machinery being used. Nevertheless, the work is fine and costs only about one-fourth what it would in this country."

Several Conferences

Conferences with the State governors, chambers of commerce and local business men were held at Monterey, Saltillo, San Luis Potosi, Queretaro and Mexico City. Agricultural organizations likewise were represented at the conference, and provisional officers of the Meridian Highway Association were elected after each conference. At Monterey, Senor Carlos Cantu was named president; Senor Antonio Lopez at Saltillo; E. S. Turnbull at San Luis Potosi, and Senor Lorenzo de Vicente at Queretaro.

At Mexico City it was decided that a general conference of all the highway committees of the several states would be called within a few months, probably in September. Then the Mexican organization could be so perfected that the active work of locating and improving the highway might be gotten under way.

The delegates were taken from Mexico City by automobile to Cuernavaca, in the State of Morales, over a recently completed highway some 45 miles in length.

3622 CARS SENT BACK FROM ABROAD IN YEAR

**Figures Show Exports Off More
Than \$33,000,000 in
Fiscal Period**

WASHINGTON, July 25—Preliminary figures compiled by the Bureau of Foreign and Domestic Commerce for the fiscal year show that 3622 American-made motor vehicles with a value of \$5,789,163 were returned to this country without payment of duty. The number for June alone was 518, with a value of \$911,785. The records do not show what proportion of the reimportations were the result of cancellation of orders.

Imports of foreign-made vehicles for June were 34, with a declared value of \$63,029, and the total for the year was 1051 vehicles, valued at \$1,264,108.

June exports of passenger cars were 1964 machines, valued at \$2,057,490. The total for the year was 84,430, with a value of \$103,786,970, a decline of \$21,598,055 in value from the previous fiscal year. Exports in June, 1920, were valued at \$14,486,362.

Truck exports for June numbered 418 machines, valued at \$531,234, making a total for the year of 17,598 vehicles, valued at \$29,511,955, a decline of \$12,065,729 from 1920. Truck shipments in June, 1920, numbered 2697, valued at \$4,216,502.

Exports of automobile parts, not including engines and tires, for June, 1921, were valued at \$2,211,528. This was almost double the May, 1921, exports, which were valued at \$1,171,071, with a total for the fiscal year of \$67,409,570, an increase of \$1,116,818 over 1920. Exports for June, 1920, however, were valued at \$7,429,188.

Total exports of automotive engines decreased in value \$10,784,195 to a total of \$23,526,568 for the year. There was a decrease for the year of \$5,747,689 in the value of tractor engine shipments.

Optimism of North Dakota Dealer Is Inspiring

(Continued from page 33)

the State has had fair crops and the eastern end with such cities as Fargo and Grand Forks have not had a crop failure in years.

Let us enumerate some of the difficulties dealers in North Dakota have faced.

1. Thanks to the Non-Partisan League, financing companies that help owners to buy cars in other States have generally withdrawn from operation in the State although one or two still operate. The General Motors Acceptance Corp. withdrew a year ago leaving General Motors dealers to shift for themselves. Most of the distributors handle their own paper.

2. The banks positively refuse to aid any one in purchasing a motor car. There are five or six cities such as Fargo, 22,000 population; Grand Forks, 15,000; Minot, 8000; Bismarck, 6000; Devil's Lake, 5,000, in which the banks have money and might aid the dealers to carry on time sales, but they stoutly refuse.

3. In the smaller towns and villages, of which there are many, the local banks have little money and could not aid if the spirit were willing. Here is an example of a banker's attitude in Grand Forks. A dealer had a farm prospect who wanted a \$1,900 car and was ready to give his notes in part payment. This farmer had 320 acres of land worth \$40 an acre and no mortgage on it. In addition, he had \$32,000 of his own savings loaned in mortgages and notes. *Yet the banker refused to carry his note on the \$1,900 car.* The dealer has the farmer notes in safe and the farmer has the car. The bankers admit the motor car is a necessity but they advise the farmer to repair his old car or do without until the crops are assured. They have the same policy for tractors, trucks and agricultural machinery. The biggest banker in North Dakota said last week he would discourage farmers buying anything until the crops of this year are definitely known. He would handle no notes on tractors, trucks, cars, farm machinery or anything else going to the farmer. After July 20 he might take loans if crop prospects are good. But he will not if crops are poor and the farmer has to be financed another year.

But in spite of all this, the North Dakota dealer has carried on. Mortality in the ranks has been amazingly small. Very few truck dealers have closed up. Few distributors have gone out of business. The distributor tells you in Fargo, Grand Forks, Devils Lake and Minot that his sales are all in the city and very few in the country but his country dealers have not gone out of business. *They all have repair shops and garages. They sell gasoline, oil, tires and the necessary repairs and accessories. They have reduced everything to a minimum.*

They repair tractors, isolated electric lighting plants, trucks, cars and in short everything that has to be repaired, but they do not sell cars. Many of them have withdrawn their deposits with the distributors, and technically may not be dealers in any particular make of car. But they still have their places of business and are operating. They are ready to go when their business revives.

**Automotive
Equipment
Sales Promotion
Week
Aug. 6-13**

LINCOLN WILL ISSUE \$2,500,000 IN BONDS

**Half of Amount Taken to
Finance Production of
Current Orders**

DETROIT, July 25—To finance the production necessary to meet current orders the Lincoln Motor Co. has arranged for an issue of \$2,500,000 in bonds. Half of this issue already has been purchased by the directors of the Lincoln company. This arrangement renders \$1,250,000 immediately available and reserves the other \$1,250,000 as a cushion to use if necessary. The issue is secured by a first mortgage on the fixed assets of the Lincoln Motor Co. The identical group is continuing its indorsement on all bank notes.

Production at the Lincoln plant is running at the rate of 300 cars a month at the present time. The overhead of the factory is carried on a production of 200 cars a month. Incoming orders are reported to be highly satisfactory to the directorate under existing conditions. More than 2000 Lincoln cars have been placed in the hands of owners during the past eight months.

In taking this action the directors state that with fundamental conditions as sound and encouraging as they are, the provision of the requisite funds seems to supply the one thing needed for assured success. The Lincoln company now has 139 sales points in the United States and has ranked high in sales in cars of its price class in recent months. The inventory is being balanced and reduced and more than \$1,000,000 has been paid on trade acceptances since the beginning of the year.

TOLEDO DEALERS FIND BUSINESS IS IMPROVED

TOLEDO, July 25—Dealers made a record during the month of June and sales are continuing well this month in Toledo. Dealers have been amazed with the amount of cash business they get these days. In the last six months or more nearly 80 per cent of the automobiles sold here have been on payment plans. The easy payment system had to be adopted and perfected to make sales possible.

But in the last month cash sales have jumped and a greater percentage of cash with sale has been received than since the good old days when it was all cash.

Co-Receiver for Rotary Tire

COLUMBUS, July 25—Judge Daniel H. Sowers in the Franklin County Courts has named Guy R. Winegarner as a co-receiver for the Rotary Tire & Rubber Co. of Columbus, a selling concern of which B. H. Loveless was named receiver several weeks ago.

CHARGE PALMER AIDED FRIEND IN BOSCH SALE

Accuse Him of "Fixing" Auction of Magneto Plant's Assets in 1918

NEW YORK, July 23—Charges first made last year that A. Mitchell Palmer had shown undue favoritism to Martin E. Kern of Allentown, Pa., in the sale of the assets of the Bosch Magneto Co., which were sold by Palmer as Alien Property Custodian in 1918 for \$4,150,000, have at last been made openly. The company then was reorganized under American control as the American Bosch Magneto Corp. The allegations have been denied by Palmer as "part of a drive by Germans to influence Congressional action so that they may regain their properties sold when this country was at war with Germany."

Charge Sale "Fixing"

It is asserted that Kern was "a close friend and business associate" of Palmer, that Kern valued the property at \$8,000,000 three weeks after he bought it, and that the auction of the assets was "fixed" so there would be no competitive bidding. It also is charged that:

The Bosch company's controlling interest in the Boonton Rubber Manufacturing Co., of which the Bosch company held more than one-half the stock, was held for \$1,000 to Kern.

The 130 patents held by the Bosch company were sold to Kern for \$1. The Reading Standard Co., manufacturer of motorcycles, of which the Bosch company held more than one-half the stock, was sold for \$1.

The St. Louis Car Co., in which the Bosch company invested \$100,000, was sold for \$1.

The good-will of the company and its various valuable trade marks were turned over to the purchaser gratis.

It was also charged that Mr. Palmer did not advertise the sale widely and held it "in the woods" on the outskirts of Chicopee, Mass.

"Nonsense," Says Palmer

Palmer characterizes all the allegations as "nonsense." The whole question was threshed out before the Senate Judiciary Committee two years ago, he asserts, when his name was presented for confirmation as Attorney General, and the committee decided unanimously that the charges against him were unfounded.

The interests which now control American Bosch Magneto as well as Gray & Davis, Inc., manufacturers of electric self-starting devices for automobiles and other products, are largely the same as those which controlled the Bethlehem Motors Corp., which has been in receivership for nearly a year. Arthur T. Murray is president of the Magneto company and chairman of the board of Bethlehem Motors. Kern is treasurer of the truck company and a director of Bosch. Duncan A. Holmes represents the Chase National Bank of this city on the board of each company.

CARRY HAND GRENADES TO COMBAT MOTOR BANDITS

PHILADELPHIA, July 25—Hand grenades are now being carried, in addition to rifles and pistols, by drivers of intercity truck concerns operating merchandise-carrying vehicles out of this city. Upwards of three-quarters of a million dollars has been stolen in merchandise along the Lincoln Highway in six weeks from trucks operating over it. Each truck convoy has a "convoy master."

VACATIONS END, REOPEN REO'S LANSING PLANT

DETROIT, July 25—The Reo Motor Car Co. of Lansing, which closed July 2 for two weeks, reopened to-day on schedule and is operating all departments. R. C. Rueschaw, sales manager, said that the simultaneous vacation plan, which was tried out this year for the first time, apparently has been highly successful and unless unexpected oppositions develop it probably will be adopted permanently. The trial of the plan by Reo has been watched with interest by several Detroit companies and in view of its success its adoption is likely to become widespread. The opportunity given for plant repair and for a general clean-up of all the production departments is said to have many advantages. Reo has resumed on a full time schedule.

Automobile manufacturers are beginning to scan the horizon in a study of prospects for closed car business in the fall. It is too early to determine definitely the size of the probable demand in September, October and November and dealers are not inclined to commit themselves.

It is felt among some well posted men in the industry that the reluctance of closed body manufacturers to make large commitments for materials there is a possibility of something resembling a closed car shortage during the fall. It is felt that when the vacation season is over a larger proportion of the cars sold will be of the enclosed type. It is certain that none of the body manufacturers are over-producing at this time on closed jobs. Manufacturers of cars say that they will not be able to formulate plans for production of enclosed models until after Aug. 1, when they will have had a chance to sound out dealers around the country.

H. C. S. to Make Closed Bodies

INDIANAPOLIS, IND., July 25—The H. C. S. is planning to get into the manufacture of closed bodies some time in August. At the present time the company has completed its first limousine. The job has wire wheels and the body is of aluminum construction.

EXPECT TO ORGANIZE BUREAU OF CREDITS

Automobile Dealers Back Coast Movement for Community Advisory Scheme

SAN FRANCISCO, July 25—Efforts to form a community advisory bureau of credits, now being urged by the Downtown Association of San Francisco, as an aid to manufacturers, distributors and other industrial operators in the getting of credits, and likewise as an aid to the banks in selecting those to whom credit should be given, are being supported by the automobile dealers and distributors as a factor in bringing even closer together the financial institutions of the city and the automotive industry. While the bankers of northern California never have closed down so tightly on the automotive industry as they have in other sections of the country, notably the Southern States, there still is opportunity for closer relations and greater community of effort between the bankers and the automobile distributors and dealers.

Idea Wins Favor

It is the idea of many of the dealers that this desideratum would be the more quickly accomplished by the Community Advisory Bureau of Credits, and a number of leading bankers have expressed themselves favorably on the subject. At present, it is rather well understood, banks grant credits largely on the character and general reputation of executives, often with little investigation of the character of the work done, or of the firm's liquid credits. Methods which yielded large returns when the firm was small may prove totally inadequate as the firm grows, and this is particularly true of firms handling trucks and tractors in the farming sections of California, where the use of automotive equipment has increased so tremendously, and costs of distribution and service have grown so rapidly. Expert information regarding the plans and projects of distributors of automotive vehicles could be obtained to the advantage of both distributor and banker through a bureau of credits such as that advocated.

Would Aid All Classes

The rate of turnover of merchandise, the method of controlling expenses, the number and form of credits granted to individual buyers of automotive equipment, and the nature of the organization under which these vehicles are distributed thus could be presented in concrete form to the banker, and in a manner to which he would more readily give ear than if they were presented in less concise dress by the automobile dealer or distributor himself. Accurate information thus not only would help the bank, but would assist the creditor to improve his own financial standing.

The sessions will be held with a view to formulating plans.

ASSOCIATION ACTIVITIES

Dealers Exchange Views

NEW CASTLE, PA., July 25—Youngstown automobile dealers were the guests of the reorganized New Castle Dealers Association at a banquet held recently at the Fountain Inn near New Castle.

President C. A. Brookover of the New Castle association introduced the guests from Youngstown as coming from one of the best automobile dealers' associations in the United States, and added that New Castle desired the benefit of their experience in the reorganization of her dealers' association. Addresses were made by visitors from the "Steel Town of Ohio."

Pres. Harry A. Froom (Oakland) spoke briefly on "Value of Organization." Past President James A. Henderson (Overland) made an address, using as his chief subject "Acquaintance in Business," and closed by reading and interpreting the Youngstown "Code of Ethics." Albert Elton (Cadillac) spoke interestingly on the subject of "Business on the Square." Other speakers whose remarks were well received were M. E. McCaskey (Oldsmobile), D. A. Heindel (Apperson-Dort), E. P. Zinn (Franklin), and Don Barnett, secretary of the Y. A. D. A.

The meeting closed at a late hour. The New Castle dealers were enthusiastic in their praise of the Youngstown men, and showed in a rising vote of thanks that they appreciated the presence and advice of their friends in the business from the neighboring State. The Youngstown secretary, Don Barnett, was invited to return on the occasion of their next meeting and explain the Youngstown Constitution and By-Laws, and assist in the reorganization. New Castle believes her association is getting away to a fine start and expects to take a hand in the organization of a state body. Her own permanent officers will be elected soon and the results of a preliminary survey convince her that she has some state material which she will advance at the proper time.

Spokane Convention July 29

SPOKANE, WASH., July 25—The Seventh Annual Convention of the Washington Automobile Chamber of Commerce will be held here on July 29 and 30 at the Hotel Davenport. Plans have been made to entertain between 300 and 400 automobile dealers from all parts of the State. P. F. Drury, nationally known as an authority on automotive subjects, will speak on "The Automobile Industry and Its Needs To-day."

Tennessee Men Meet

NASHVILLE, TENN., July 25—Upon invitation of the Nashville Association, the Tennessee Automotive Trades Association held its second annual convention at Nashville. Sessions were held at the Old Hickory Club, located at the

former Government powder plant, fifteen miles up the Cumberland River, a picturesque and finely developed industrial center. The club house has an excellent auditorium. Stimulation of business, methods, insurance features, work of the past year, constitutional changes and by-laws were discussed. Clarksville, Columbia, Johnson City and many towns in the State sent delegates.

Tehama County Organizes

RED BLUFF, CAL., July 25—The Tehama County Automobile Trades Association has been organized here with representatives of the automotive industry from every town in the county present at the meeting and enrolled as members. The following officers were elected: H. H. Wright of Red Bluff, president; Miles G. Ramer of Corning, first vice-president; Harry Huber of Red Bluff, second vice-president; Job B. Jukens of Red Bluff, treasurer, and George Wohl of Red Bluff, secretary and manager.

Columbus Changes By-Laws

COLUMBUS, July 25—Columbus Automobile Trade Association at a recent meeting adopted a new constitution and by-laws which was made necessary because of the exigencies of the occasion. Under the former constitution tire dealers as well as garagemen were not permitted to become members. Under the new plan all allied industries are admitted to associate membership. This included tire dealers and tire repair men, garagemen, proprietors of repair shops and service concerns. Under the new constitution there are various divisions such as passenger cars, trucks, tire dealers, accessory dealers and service concerns.

Louisiana Dealers Meet

MOBILE, LA., July 25—Automobile dealers throughout the State are attending the fourteenth annual meeting of the dealers' association at Coon to-day. The meeting will be continued to-morrow.

Select Memphis Chief

NASHVILLE, TENN., July 25—G. P. Schlecht, of Memphis, was elected president of the Tennessee Automotive Trades Association at its annual convention in this city, July 19. George Byrd, of Knoxville, was chosen vice-president, and L. M. Hirsig, of Nashville, treasurer. A feature of the convention was an address by A. R. Kroh, of Chicago, in which he urged a more thorough study and better understanding of agricultural problems by business men engaged in the automotive business. An amendment to the by-laws provides for the appointment of district governors in the various sections of Tennessee.

USED CAR GUARANTEE GOES WITH EACH SALE

Birmingham Gives 30-Day Guarantee on Some and 24-Hour Test on Others

BIRMINGHAM, ALA., July 25—The E. R. Parker Motor Co. of Birmingham, Atlanta and Macon, Ga., has instituted a 30-day service guarantee on every used Cleveland, Chandler or Marmon car, with a 24-hour trial on every used car of any make that is sold from their three places of business. This is in the nature of a guarantee of good faith in the sale of used cars.

The company guarantees to put every used car leaving the shops in perfect condition, allowing the purchaser to try out the car for 24 hours and return it in case of dissatisfaction. When any of the three cars the Parker company handles are sold after being used the company contracts to keep them in repair free of charge, if repairing is needed, for 30 days.

"It is only honest to admit that the purchase of used cars is a risky business sometimes, and it is our aim to make that risk as small as possible, thereby cultivating the faith of the buying public in the E. R. Parker Motor Co.," said T. B. McCarty, manager of the local branch. "Unless sincere consideration is given to the used-car problem which now exists among motor car dealers throughout the country, we will awake some morning to find that serious complications have arisen which bid fair to prove embarrassing.

"There is a great temptation on the part of every dealer to overstep the bounds of good judgment and make undue allowances on used cars in making trades. In the heat of a trade it is very easy to go too strong on an allowance when sound reasoning must be hammering on the fact that an over-allowance always acts as a boomerang. To over-allow is to overcharge, for to remain in business one is bound to make a fair profit. If profits are sacrificed to the public in trades service, the better half of the car must become inefficient because stinted."

State Gets After Standard

BUFFALO, July 25—The district attorney of Erie County and the corporation counsel of Buffalo have declared they propose to take retaliatory action against the Standard Oil Co. which they accuse of "maintaining a high price for gasoline in the face of declining prices for crude oil." The officials assert that the company's 700 filling tanks and pumps are in the streets contrary to law and that their removal will be ordered. It is contended that a reduction of 5 cents a gallon in the wholesale price is not in proportion to the decline of \$4 a barrel in the price of crude oil.

CHANGES IN THE TRADE

Moon Motor Car Co. has appointed W. R. Brashear service department manager of their factory branch at St. Louis, Mo.

Tom J. Cronan has been appointed representative of the Franklin company in the counties of Ingham, Clinton, Eaton and Shiawassee, Michigan.

Charles A. Rodgers, until recently branch manager of the Lexington Motor Car Co. here, has been appointed Brooklyn branch manager for the Franklin Motor Car Co.

Murphy Motor Co., Nashville, announces the taking over by them of the Reo line. The consolidation caused the company to obtain new quarters and the former Reo home now houses the Reo.

C. A. Fitzgerald has been placed in charge of a new division of the Sun company. The territory comprises western Missouri, Nebraska, Kansas and Oklahoma with the division office in Kansas City.

William Kratzer and F. L. Brooke have opened the East Side Garage in Lansing, Mich. Kratzer is a Lansing man and Brooke has been for several years connected with the Packard service station in Detroit.

J. W. Osborn has been appointed general sales manager for R. E. Becker, distributor of Studebaker and Cadillac cars in Grand Rapids. Osborn has been identified with the Becker Automobile Co. for about 10 years. Until recently he was in charge of Studebaker sales for this territory.

Henry B. Knight, who was a big owner in the Capital Motor Car Co. of Columbus, central Ohio distributors for the Reo and Pierce-Arrow, has purchased all of the outstanding stock and is now in complete control. He plans to erect another story on the service department to care for increased business.

George H. Calhoun, who has been sales manager for C. W. Greene Co., Tampa jobbers, has resigned. He has had several years' experience in the jobbing business. He will take about two months' rest, after which time he will arrange to represent at least one or more manufacturers of automobile equipment or accessories.

Godfrey Strellinger, formerly a field representative for Dodge Bros. and until recently assistant sales manager of the Hayes Manufacturing Co., has severed his connection with the latter to join the field force of the Maxwell Motor Sales Corporation. Strellinger has been well fitted by experience for this kind of work and should prove a valuable asset to the Maxwell organization.

Ralph C. Wilson, formerly manager of the Columbus Cadillac Co., who was with the Packard Co., in Detroit, before he came to Columbus six years ago, has joined the Packard Columbus Co., agents for the Packard in central Ohio. The new salesrooms and service station of the Packard Columbus Co. are now occupied. It has one of the most modern salesrooms and service departments in the Middle West.

Philadelphia-Roamer Co. hereafter will handle the Roamer car for eastern Pennsylvania, southern New Jersey, Delaware and eastern Maryland. The organization is not a factory branch, but is closely affiliated with the factory, because A. C. Barley, president and principal owner of the Barley Motor Car Co., manufacturer of Roamer cars, is president and one of the principal owners of the Philadelphia organization.

Edward O. Faeth, president of the Stowe Supply Co., has been elected president of the Chamber of Commerce of Kansas City, Mo.

Faeth has been a director of the chamber the past two years, and has long been active in its work and councils. He has also been active in the Implement, Vehicle & Hardware Association of Kansas City, of which he is a former president. Indications of his particular service in the organization are his committee assignments—on trade extension and on American ideals.

Caesar Irsch of Tampa, Fla., has been named distributor for the Cadillac company for all of south Florida. Since the Cadillac has been handled in Tampa the account for south Florida has been in the hands of the Forman Motor Car Co., and there were twelve applicants for appointments as distributor when it became known that the Forman company was going to release it. Mr. Irsch has had twelve years' experience in the automobile business and has had an enviable reputation as an appraiser of used cars. He has served dealers, banks and insurance companies in various parts of the state.

F. W. Rosche has been appointed Southern district sales manager for the Briscoe Motor Corporation of Jackson, Mich. Rosche served many years in Birmingham, where he was manager of the Overland Motor Car Co. He was largely responsible for the special popularity of the Overland car in Birmingham. Rosche is establishing his headquarters in Birmingham and will work the Southern States from this location. The new Briscoe has many attractive features, and when Rosche gets warmed up to the subject they seem much more attractive.

Paul Crawford, pioneer automobile man of Birmingham and the man who introduced Chandler cars to Alabama, has recently become identified with the Southern Motor Company, Hupmobile distributors, and according to rumors is making his usual splendid sales record. Mr. Crawford left the Pryor Motor Co., where he made an enviable record, to take up his new position. He is an experienced salesman and knows the automobile business from the ground up, having been identified with various Birmingham companies for many years.

J. H. Newmark, who for the past five years has been advertising manager of the Chevrolet Motor Car Co. in New York, has been appointed as assistant to Norval Hawkins, who is on the advisory board of the General Motors Corp. in Detroit. Newmark has taken up his work in Detroit with his office located in the General Motors building this city. Newmark has been twelve years with the General Motors companies, having served one year with Oldsmobile; six with the Oakland Motor Car Co., and five with Chevrolet. Previous to his association with the Chevrolet company he was with the Apperson Motor Car Co. in Kokomo, Ind. Newmark is well known in the advertising field and as an author of books on automobile salesmanship.

Kalamazoo Trucks Cut

KALAMAZOO, MICH., July 25—A general price reduction ranging from \$300 on the lighter models to \$425 on the heavier trucks has been announced by the Kalamazoo Motors Corp., which manufactures the Kalamazoo truck. New prices f.o.b. Kalamazoo range from \$2,495 for the 3000 lb. truck to \$4,800 for the Road Builder's special 5-ton truck.

POLICE TO REGULATE BAY STATE'S TRAFFIC

Department Chiefs and Officials Agree on Traffic Signal Plan at Conference

BOSTON, July 25—Motorists traveling throughout Massachusetts in the near future will not be mixed up on traffic signals, for plans have been outlined whereby the different police departments will adopt standardized regulations to govern traffic. This was brought about as a result of a conference yesterday at the Massachusetts Automobile Club attended by more than 100 chiefs of police and representatives of the Safe Roads Federation.

Following an all-day session, it was voted to appoint a committee to take up the matter. This committee comprises Chief Michael Feeney of Fall River, chairman; Deputy Chief Thomas McMurray of Worcester, Chief Edward P. Doherty of New Bedford, Chief James H. McKenna, Waltham; Capt. Bernard J. Hoppe, Boston Traffic Squad and Capt. George A. Parker of the State Motor Patrol.

The conference voted also that it was the sense of the meeting that, in the opinion of those present:

Motorists who drive under the influence of liquor should be sent to jail instead of being fined.

Pedestrians should be made to cross the street at protected crossings in the interest of safety.

NEARLY 70 INDICTED IN ALLEGED STOCK FRAUD

NEW YORK, July 25—Nearly 70 alleged representatives of the American Tire Corp. of Niles, Ohio, have been indicted in the Federal courts on charges of using the mails to defraud. They are located in this city, Syracuse, Buffalo, Boston, Springfield, Mass.; New Haven and Providence. Most of them represent the brokerage firm of Durell, Gregory & Co. of this city, the members of which also have been indicted.

The American Tire Corp., a bona fide concern incorporated in Delaware with a capital of \$5,500,000, is not involved in the charges, but it is charged that investors throughout the country have lost more than \$1,000,000 through the operations of the men accused. Development of a new process of tire manufacture is said to have necessitated an increase in capital, and officers of the company came here to float an issue of \$1,000,000. According to the indictment, the brokers agreed to return to the company \$2 for every share sold and then sold the stock for as much as \$10 a share.

Elcar Has New Agency

NEW ORLEANS, July 25—F. H. Ahrens has obtained the exclusive sale rights for Elcar in New Orleans. Ahrens is an Orleanian and has been in the automobile business for twelve years.

COMING EVENTS

SHOWS

Denver	Aug. 10-12	Midsummer Exhibition of Cars, Trucks and Camping Equipment, Civic Center, under auspices of the Denver Automobile Dealers Association.
Toronto, Can.	Aug. 27	Canadian National Automobile Show.
Indianapolis	Sept. 5-10	Automobile and Accessory Show in conjunction with Indiana State Fair, conducted by Indianapolis Automotive Trade Ass'n, John B. Orman, Mgr.
Ottawa, Ont.	Sept. 9 to 17	Ottawa Motor Show.
Cincinnati	Oct. 1-8	Fall Automobile Show, Cincinnati Automotive Dealers' Ass'n, Music Hall.
New York	Nov. 27-Dec. 3	Automobile Salon, Hotel Commodore.
Chicago	January	Automobile Salon, Drake Hotel.
New York	Jan. 7-13	National Automobile Show, under auspices of National Automobile Chamber of Commerce, Madison Square Garden.
Chicago	Jan. 28-Feb. 3	National Automobile Show, under auspices of National Automobile Chamber of Commerce, Coliseum.

Santiago, Cuba	March, 1922	Annual Automobile Show.
Rio de Janeiro, Brazil	Sept., 1922	Automotive Exhibition in connection with Brazilian Centenary.

RACES

Detroit	July 9-24	Michigan Pikes Association Tour, Michigan and Ontario.
Le Mans, France	July 25	Grand Prix.
Uniontown, Pa.	Labor Day	Autumn Classic.
Los Angeles	Nov. 24	Speedway Events.

CONVENTIONS

Coden, Ala.	July 25-28	Midsummer Meeting of Alabama Automobile Dealers' Ass'n.
Chicago	Oct. 12-14	National Implement & Vehicle Association Convention, Congress Hotel.
Chicago	Nov. 14-19	Annual Meeting and Business Exhibit of Automotive Equipment Association.
New York City	Nov. 22-24	Semi-Annual Convention of Factory Service Managers, N. A. C. C., H. R. Cobleigh, Secretary.

The New Car and Truck Description Index

Giving the date and page number on which they appeared

Cars

Ace	Jan. 12, 1921-15
Ambassador	Feb. 2, 1921-11
Buick, 1921	Aug. 18, 1920-14
Collinet (Salon)	Nov. 24, 1920-18
Duesenberg 8	Nov. 17, 1920-33
Essex (Cabriolet)	Nov. 10, 1920-35
Fergus, 1921	Jan. 12, 1921-23
Forster	Aug. 25, 1920-33
Friend	Jan. 12, 1921-14
Globe Four	Oct. 20, 1920-32
Handley-Knight Four	Nov. 17, 1920-32
Haynes Model 60	Jan. 12, 1921-20
Jackson Four	Jan. 12, 1921-18
Kelsey	Dec. 1, 1920-81
Kenworthy 8	Jan. 12, 1921-13
Kissel Coach Sedan	Jan. 19, 1921-21
Lafayette (Coupe)	Oct. 27, 1920-40
Lexington Series T	Jan. 5, 1921-82
Liberty (Coupe)	Aug. 18, 1920-31
Lincoln	Sept. 8, 1920-34
McFarlan Type 147	Oct. 27, 1920-41
Mercedes (limousine)	Aug. 18, 1920-37
Mercedes (Post War Model)	Oct. 20, 1920-33
Milburn Electric (38D & 38T)	Jan. 12, 1921-21
Moller	Mar. 30, 1921-21
Nash Four	Nov. 10, 1920-34

National (Sextet Phaeton)	Dec. 15, 1920-36
Navarre	Jan. 12, 1921-13
Northway 6	Jan. 12, 1921-13
Oldsmobile Light 8	Mar. 9, 1921-33
Oldsmobile (Model 43-A)	Dec. 15, 1920-33
Packard Single Six	Sept. 29, 1920-32
Paige Big Six (Six-66)	Sept. 1, 1920-34
Parenti	Jan. 12, 1921-14
Piedmont 4.30	June 29, 1921-30
Pierce-Arrow	Nov. 24, 1920-32
Premocar Special	Feb. 9, 1921-25
Rolls-Royce	Mar. 23, 1921-32
R & V Knight Four	Jan. 12, 1921-16
Scripps-Booth Six	July 13, 1921-32
Sheridan Eight	Oct. 6, 1920-32
Simplicity Six	Aug. 4, 1920-40
Stanwood Six	Sept. 15, 1920-31
Sterling Knight	Feb. 2, 1921-11
Stevens-Duryea	Dec. 1, 1920-80
Wills-Sainte Claire	Mar. 16, 1921-28
Wills Sainte Claire Roadster	July 20, 1921-33

Trucks

Acme (¾ ton)	April 13, 1921-33
Akron Multitruck (1 ton)	Feb. 9, 1921-32
Aries (5 ton)	Jan. 12, 1921-49
Armleder (1 ton)	Nov. 10, 1920-37
Available (1½ ton)	Aug. 4, 1920-32

Avery (1 ton)	Nov. 10, 1920-26
Bessemer (4 ton)	Jan. 12, 1921-30
Bollstrom (4 ton)	Nov. 24, 1920-34
Bridgeport (1½, 2½ & 6 ton)	Jan. 12, 1921-30
Brockway (Highway Express)	Jan. 26, 1921-25
Case (2 ton)	Feb. 16, 1921-16
Clinton (1½, 2½, 3½ & 5 ton)	Jan. 12, 1921-30
Commerce (Mercantile Exp.)	Nov. 10, 1920-37
Cyclone (1½ ton)	Mar. 30, 1921-32
Duplex (2½ ton)	Aug. 18, 1920-31
Eagle (2 ton)	Aug. 11, 1920-32
Federal (5-6 ton)	May 4, 1921-82
Gramm-Bernstein (1 ton)	Nov. 10, 1920-35
Grant (1½ ton)	Aug. 11, 1920-32
G. & J. (2 & 3½ ton)	May 11, 1921-32
G. M. C. (K-15, ¾ ton; K-16, 1 ton; K-41, 3½ ton; K-101, 5 ton)	Mar. 2, 1921-28
Huffman (Models B & C 1 & 2½ tons)	June 29, 1921-30
Inter Harvester (¾ ton)	Feb. 16, 1921-32
Kissel Speed Truck (1 ton)	Mar. 23, 1921-33
Lone Star (1½ ton)	Oct. 27, 1920-30
Lorain (2 ton)	Sept. 1, 1920-30
Mack (double red, axles)	Jan. 5, 1921-33
Moline farm truck (1½ ton)	Nov. 10, 1920-36
Pierce-Arrow (2 ton x 5, 3½ ton, W-2; 5 ton, r-10)	Sept. 8, 1920-30
Rainier (¾ & 5 ton)	Jan. 12, 1921-31
Republic (¾ ton)	July 20, 1921-33
Republic Express, Model 10	Mar. 30, 1921-21
Rumely (1½ ton)	Nov. 10, 1920-36
Service Speed Wagon (1 ton)	Feb. 16, 1921-32
Standard 5-K (5 ton)	Apr. 13, 1921-33
Stoughton (1 ton)	Feb. 23, 1921-33
Stoughton (1½, 2 & 3 ton)	Aug. 25, 1920-33
Transport (3½ ton)	Nov. 3, 1920-31
Ward La France (5 ton)	Jan. 12, 1921-30
Winther	Feb. 2, 1921-11

IMPROVEMENT WILL MARK COAST'S SHOW THIS YEAR

SACRAMENTO, CAL., July 25—The annual automobile show of the California State Fair this year will be more nearly a comprehensive State exhibit than ever before. Previous to last year it was just about a Sacramento display of motor cars. Last year other dealers were invited in, and many of them accepted. This year the Sacramento Auto Trades Association is asking the distributors of the State to enter the show, or at least

to bear part of the expense to which local dealers have gone in the past to advertise their cars to the State at large.

This plan is receiving a lot of support, and it is highly probable, say the State Fair officials, that the three huge tents provided for the show will not be sufficient. One of these tents is to house the automobile show, another the truck display and the third the accessories exhibit. These last two departments were given little consideration last year, but it is planned to make them of interest this year.

NEW OHIO HEADLIGHT LAW GOES INTO EFFECT AUG. 16

COLUMBUS, July 25—The law enacted at the last session of the Ohio General Assembly regulating the glare of headlights becomes effective August 16, which is the time of the expiration of the referendum period. The new law provides that no headlights can be used on the highways and streets of the State unless covered by a lens approved by the Ohio Highway Commissioner, after actual tests.

Specifications of Current Passenger Car Models

NAME AND MODEL	Engine Make	Cylinders: Bore and Stroke	WB	Tires	2-Pass.	5-Pass.	7-Pass.	Coupe	Sedan	NAME AND MODEL	Engine Make	Cylinders: Bore and Stroke	WB	Tires	2-Pass.	5-Pass.	7-Pass.	Coupe	Sedan
Ace. Guy. G	6-31x45	123	32x4	\$2975	\$2975	...	\$3680	\$3680		Maibohm. B	Falls.	6-31x45	116	32x4	\$1575	\$1575	\$1750	\$2395	\$2395
Ace. H-S.	6-39x45	123	32x4	2975	2975	...	3680	3680		Marmont. 34	Ow.	6-39x45	136	32x4	\$1985	\$1985	\$3855	\$4875	\$5275
Ace. L-S.	4-31x45	116	32x4	2260	2260	...	...	...		Maxwell. 25	Ow.	4-39x45	109	30x3 1/2	845	845	1445	1545	
Allen. Series 43	4-31x45	110	32x4	\$1385	1385	...	...	...		McFarlan. 1921	Ow.	4-41x45	140	33x5	6300	6300	7500	7500	
Ambassador. C	6-39x45	136	33x5	14500	14500	...	6500	6500		Mercur. Series 5	Ow.	4-39x45	132	32x4 1/2	4500	4500	4500	5700	6200
American. R	6-31x45	127	32x4	2195	2275	2350	3150	3150		Merit. Cont.	6-31x45	119	32x4	2245	2245	...	...	...
Anderson. Series 40	6-31x45 1/2	120	32x4	2195	1845	2795	2795	2795		Metour. R&RR	Dues.	4-41x45	129	32x4 1/2	5500	5500	...	...	...
Apperson. 8-21-S	8-31x45	130	34x4 1/2	...	3000	3250	4500	4500		Metz. M6	Rut.	6-31x45	120	32x4	1995	1995	2795	2895	
Apperson. Anniversary	8-31x45	130	34x4 1/2	...	3000	3750	...	...		Mitchell. F-40	Ow.	6-31x45	120	33x4	1490	1490	1700	2590	2690
Auburn. 6-39	6-31x45 1/2	120	32x4	1695	1695	2795	2795	2795		Mitchell. F-42	Ow.	6-31x45	127	33x4	...	...	1995	...	...
Beggs. 20T	6-31x45 1/2	120	33x4	1775	1775	...	2675	2775		Moller. A	Ow.	4-29x4	100	27x3 1/2	2000	...	...	...	...
Bell. 4-32	4-31x45	114	31x4	1495	1495	...	...	...		Monroe. S-9 & 10	Ow.	4-31x45 1/2	115	32x3 1/2	1295	1295	...	...	...
Bell. 6-50	6-31x45	124	32x4	1695	1695	...	...	...		Monroe. S-11 & 12	Ow.	4-31x45 1/2	115	33x4	...	...	2075	2175	
Biddle. 81	4-31x45 1/2	121	32x4	3475	3475	...	3975	3975		Moon. 6-48	Cont.	6-31x45 1/2	122	32x4	2085	1985	2485	2985	2985
Birch Super-Four	4-31x45	117	33x4	1545	1545	1395	2295	2295		Murray-Mac Six	Ow.	6-31x45 1/2	128	34x4 1/2	4250	4250	4250	...	...
Birch Light Four	4-31x45	108	30x3 1/2	1195	1195	...	...	...		Nash. 681-7	Ow.	6-31x45	121	33x4	1525	1545	1695	2395	2695
Birch Light Six	4-31x45	117	33x4	1595	1595	...	...	...		Nash. 682	Ow.	6-31x45	127	34x4 1/2	4185	4185	1695	...	...
Bour-Davis. 21S	6-31x45 1/2	126	33x4 1/2	2385	2385	...	...	...		Nash Four. 41-4	Ow.	4-31x45	112	32x3 1/2	1175	1195	1735	1935	
Brewster. 91	4-4 x5 1/2	125	32x4 1/2	17000	7000	...	10500	10500		National Sextet. BB	Ow.	6-31x45 1/2	130	32x4 1/2	2990	2990	2990	3990	3990
Briscoe. 4-34	4-31x45	90	28x3	395	395	...	1685	1685		Nelson. D	Ow.	4-31x45 1/2	104	32x4	...	1900	...	...	...
Brook. S-21 A	2-31x45 1/2	118	33x4 1/2	1495	1525	...	2135	2435		Noma. IC	Cont.	6-31x45 1/2	128	32x4 1/2	3000	3200	...	4450	
Buick. 1922-44-5-6-7	6-39x45 1/2	124	34x4 1/2	...	...	1735	2325	2635		Northway	Ow.	6-31x45 1/2	128	33x5	4200	4200	6000	5600	5400
Buick. 1922-48-9-50	6-39x45 1/2	116	33x4	1295	1575	...	2050	2150		Norwalk. 430-KC	Lye.	4-31x45	116	32x3 1/2	1035	...	...	...	...
Bush. E.C. 4	6-31x45	116	33x4	1295	1575	...	2050	2150		Oakland. 34-C	Ow.	6-21x45 1/2	115	32x4	1095	1145	1625	1725	
Bush. E.C. 6	6-31x45	116	33x4	1295	1575	...	2050	2150		Ogden. 6-60	Ow.	6-31x45 1/2	134	33x5	3850	3750	3900	5000	5100
Cadillac. 59	8-31x45 1/2	125	34x4 1/2	3790	3790	3940	...	4950		Oldsmobile. 43-A	Ow.	4-31x45 1/2	115	32x4	1325	1345	1895	2100	
Carroll. C	6-31x45	128	...	3985	3985	...	...	5190		Oldsmobile. 46	Ow.	6-21x45 1/2	112	32x4	1450	1450	2145	2145	
Carroll. D	6-31x45	128	...	3185	3185	...	...	...		Oldsmobile. 47	Ow.	8-21x45 1/2	115	32x4	1725	1875	2225	2425	
Case. V	6-31x45 1/2	126	34x4 1/2	2250	2250	2900	3285	3285		Overland. 4	Ow.	4-39x4	100	30x3 1/2	695	695	...	1000	1275
Chalmers. 6-30	6-31x45 1/2	122	32x4	1495	1545	2295	2445	2445		Packard. Single-Six	Ow.	6-39x45 1/2	116	33x4 1/2	2975	2975	3750	3975	
Chalmers. 6-30	6-31x45 1/2	122	32x4	1495	1545	2295	2445	2445		Packard. Twin Six	Ow.	12-3 x5	136	35x5	4850	4850	6600	6800	
Champion. Tourist	4-31x45	113	32x3 1/2	1095	1095	1795	...	...		Paige. 6-42	Ow.	6-31x45	119	32x4	1635	1635	2450	2570	
Champion. Special	4-31x45	113	32x4	1785	1785	2785	2885	2885		Paige. 6-66	Cont.	6-31x45	131	33x4 1/2	2975	3295	2875	3755	3830
Chandler. Six	4-31x45	102	30x3 1/2	625	625	975	975	975		Pan. A	Ow.	4-31x45	108	33x4	...	1500	...	...	...
Chevrolet. 49B	4-31x45	110	30x3 1/2	975	975	1575	1575	1575		Pan American. E&F-55	H-S.	6-31x45	121	33x4	2000	2000	2100	...	...
Chevrolet. 49B	4-31x45	110	30x3 1/2	975	975	1575	1575	1575		Parenti. 1921	Ow.	8-21x45 1/2	125	32x4	...	2000	...	3000	
Cleveland. 40	6-3 x4 1/2	112	32x4	1295	1295	2195	2295	2295		Patersen. 650	Cont.	6-31x45 1/2	120	33x4	...	1595	1625	2895	2895
Climber Four	4-31x45	125 1/2	32x4 1/2	2250	2250	...	3650	3650		Pearless. 56-S-7	Ow.	2-31x45 1/2	90	28x3	335	...	...	3950	
Climber Six	6-31x45	127	33x5	2550	2550	3095	3095	3095		Peters. 4-30	Lye.	4-31x45	116	32x3 1/2	...	1270	...	...
Cole. 870	8-31x45 1/2	127	33x5	2550	2550	3095	3095	3095		Piedmont. 4-40	Cont.	6-31x45 1/2	122	32x4	1495	1495	...	...
Columbia Challenger	6-31x45	115	32x4	1495	1495	2495	2595	2595		Piedmont. 6-40	Ow.	6-4 x5 1/2	138	33x5	8000	7500	8500	9000	
Columbia. D-C&S	6-31x45 1/2	125	33x4 1/2	2380	2450	...	2450	2450		Pierce-Arrow	Ow.	6-31x45	120	32x4	1945	1895	...	...
Comet. C-53	6-31x45 1/2	125	33x4 1/2	2380	2450	...	2450	2450		Pilot. 6-45	Tector	6-31x45	126	32x4 1/2	2285	2285	2335	3350	3400
Commonwealth. 44	6-31x45 1/2	122 1/2	32x4	3000	3000	4500	4500	4500		Pilot. 6-50	H-S.	6-31x45	142	35x5	6750	Chassi s Price	...	...
Crawford. 21-6-40	6-31x45 1/2	122 1/2	32x4	3000	3000	4500	4500	4500		Porter. 6-50	Ow.	4-41x45 1/2	126 1/2	33x5	3790	3690	3890	4690	5190
Crow-Elkhart. L63-65	6-31x45	117	33x4	1545	1545	2395	2395	2395		Premier. 6-D	Ow.	6-31x45 1/2	117	32x3 1/2	1205	1205	...	...
Crow-Elkhart. S63-65	6-31x45	117	33x4	1545	1545	2395	2395	2395		Premocar. 6-40 A	Falls.	6-31x45	117	32x3 1/2	1205	1205	...	...
Daniels. D-19	8-31x45 1/2	132	34x4 1/2	5350	5350	6250	6950	6950		Raleigh. A-6-60	H-S.	6-31x45	122	32x4 1/2	2250	2250	3100	3200	
Daniels. 61-67	8-31x45	120	33x4	1995	1895	2150	2795	2795		R & V Knight. R	Ow.	4-39x45	116	32x4	2150	2150	2850	2950	
Dispatch. Wise.	4-39x45	120	34x4	1250	1350	1525	1575	1575		R & V Knight. J	Ow.	6-31x45 1/2	127	32x4 1/2	3350	3350	4000	4200	
Dixie Flyer. H-S-70	4-31x45	112	32x4	1445	1445	2295	2345	2345		Reo. T	Ow.	6-31x45	120	33x4	1850	1850	2700	2750	
Dodge Brothers. 6-80	6-4 x5	114	32x4	935	985	1585	1785	1785		Revere. C	Dues.	4-41x45	131	32x4 1/2	4850	4650	14650	6500	
Dorris. 17-12	4-31x45	108	31x4	985	985	1535	1685	1685		Roamer. 6-54-F	Cont.	6-31x45 1/2	138	32x4 1/2	3150	3150	3250	...	
Dort. D-Ly	4-31x45	108	31x4	985	985	1535	1685	1685		Rolls-Royce	Ow.	6-41x45 1/2	143 1/2	33x5	U. S. Chassi s Price	11750	...	...
Dupont. A	4-31x45 1/2	124	32x4 1/2	3400	3400	4900	4900	4900		Romer. Cont.	Ow.	6-31x45 1/2	120	32x4	2000	2000	2100	2450	2750
Elcar. K-4	4-31x45	117	33x4	1195	1195	2395	2495	2495		Saxon. 125	Ow.	4-31x45	112	32x4	1545	1495	2295	2295	
Elcar. 7-R	6-31x45 1/2	117	33x4	1595	1595	2395	2495	2495		Sayers Six. DP	Cont.	6-31x45 1/2	118	33x4	2495	2195	...	3295	
Elgin. K-1	6-31x45	118	33x4	1595	1595	2395	2495	2495		Scripps-Booth. B-39-42	Nort.	6-21x45 1/2	115	32x4	1275	1295	1950	2100	
Easex. K-1	4-39x45	108 1/2	32x4	1445	1445	1950	2300	2300		Scripps-Booth. L & O	Leik.	6-31x45 1/2	115	32x4	1470	1490	2350	2375	
Fergus. S-5-21	6-31x45	126	33x4 1/2	...	...	8500	...	...		Severin. Six	Cont.	6-31x45 1/2	122	33x4	1485	1485	2100	2250	
Ferris. 6-31x45 1/2	6-31x45 1/2	130	32x4 1/2	3350	2595	3675	3675	3675		Sheridan. A	Nort.	4-31x45 1/2	116	33x4	1485	1485	2060	2360	
Ford. T	4-39x45	100	30x3 1/2	770	770	605	760	760		Skelton. 35	Lye.	4-31x45	112	32x3 1/2	995	995	...	...
Franklin. 9-B	4-31x45	115	32x4	2550	2550	3650	3650	3650		Southern Six. 660-2	H-S.	6-31x45	127	32x4 1/2	2875	2875	2995	...	
Friend. Four	4-31x45 1/2	112	32x3 1/2	1285	1285	1985	2055	2055		Standard. J	Ow.	8-31x45	127	34x3 1/2	3400	3400	4500	4800	
Gardner. G	4-31x45	112	32x3 1/2	1995	1995	1795	1795	1795		Stanley Steamer	Ow.	2-3 x5	100	34x4 1/2	2800	2600	2600	3775	3850
Globe. B-10	4-39x45	115	32x4	1550	1550	2450	2450	2450		Stearns. SKL4	Cont.	6-31x45 1/2	118	33x4	2050	2050	29		

Specifications of Current Motor Truck Models

NAME AND MODEL														NAME AND MODEL														NAME AND MODEL													
Tons Capacity		Chassis Price	Bore and Stroke		TIRES		Final Drive	Tons Capacity		Chassis Price	Bore and Stroke		TIRES		Final Drive	Tons Capacity		Chassis Price	Bore and Stroke		TIRES		Final Drive																		
Front	Rear		Front	Rear	Front	Rear		Front	Rear		Front	Rear	Front	Rear		Front	Rear																								
Acason	1 1/2	\$1650	3 1/2 x 5	34x5 1/2	34x5 1/2	W	Cook, 41	2	\$3000	4 x 5 1/2	36x6 1/2	38x7 1/2	I	Gary, I	1 1/2	\$2550	4 x 5 1/2	36x3 1/2	36x5	W																					
Acason, R	1 1/2	2280	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Corbett, E	1	2200	3 1/2 x 5	34x3 1/2	34x4	W	Gary, J	2 1/2	3150	4 1/2 x 5 1/2	36x4	36x7	W																					
Acason, RB	1 1/2	2485	3 1/2 x 5 1/2	36x3 1/2	36x6	W	Corbett, D	1 1/2	2600	3 1/2 x 5	36x3 1/2	36x5	W	Gary, K	3 1/2	4050	4 1/2 x 5 1/2	36x5	40x5d	W																					
Acason, H	2 1/2	3295	4 1/2 x 5 1/2	36x4	36x4d	W	Corbett, C	2	3150	4 1/2 x 5 1/2	36x3 1/2	36x7	W	Gary, M	5	5150	5 x 6 1/2	36x6	40x6d	W																					
Acason, L	3 1/2	4295	4 1/2 x 5 1/2	36x5	36x5d	W	Corbett, B	2 1/2	3300	4 1/2 x 5 1/2	36x4	36x7	W	Gersix M	1 1/2	3100	4 x 5 1/2	36x3 1/2	36x7	W																					
Acason, M	5	5250	5 x 6 1/2	36x6	40x12	W	Corbett, A	3 1/2	4100	4 1/2 x 5 1/2	36x5	36x10	W	Gersix K	2 1/2	3500	4 1/2 x 5 1/2	36x4	36x8	W																					
Ace, C	1 1/2	2295	3 1/2 x 5 1/2	34x3 1/2	34x5	W	Corbett, AA	5	5000	4 1/2 x 6	36x6	40x6d	W	Gersix	3 1/2	4500	4 1/2 x 6	36x5	40x12	W																					
Ace, A	2 1/2	2795	4 1/2 x 5 1/2	36x4	36x7	W	Cyclone	1 1/2	2800	3 1/2 x 5	34x5 1/2	36x6 1/2	I	Giant, 15-A	1 1/2	2250	3 1/2 x 5	34x3 1/2	34x5	W																					
Acme, G	1 1/2	....	3 1/2 x 5	35x5 1/2	35x5 1/2	W	Dart, S	1 1/2	....	3 1/2 x 5 1/2	34x3 1/2	34x6	W	Giant, 16	2	3150	4 1/2 x 5 1/2	36x4	36x7	W																			
Acme, B	1 1/2	....	3 1/2 x 5	34x3 1/2	34x5	W	Dart, M	2 1/2	....	4 1/2 x 5 1/2	36x4	36x7	W	Giant, 17	3 1/2	4150	4 1/2 x 5 1/2	36x5	36x5d	W																			
Acme, F	1 1/2	....	3 1/2 x 5	34x3 1/2	34x5	W	Dart, W	3 1/2	....	4 1/2 x 6	36x5	36x10	W	Globe D-20	1 1/2	1495	3 1/2 x 5	33x4 1/2	33x4 1/2	B																			
Acme, A	2	....	4 1/2 x 5 1/2	36x4	36x7	W	Day-Elder, A	1	2225	3 1/2 x 5	34x3 1/2	34x4	W	Globe	1	1495	3 1/2 x 5	33x5	33x5	B																				
Acme, C	3 1/2	....	4 1/2 x 5 1/2	36x5	40x10	W	Day-Elder, B	1 1/2	2425	3 1/2 x 5	34x3 1/2	34x5	W	Golden West, GH	3	5000	4 1/2 x 6	36x7	36x7	W																				
Acme, E	5	....	4 1/2 x 5 1/2	36x6	40x12	W	Day-Elder, D	2 1/2	2900	4 1/2 x 5 1/2	36x4	36x7	W	Golden West, G	3 1/2	4500	4 1/2 x 6	36x6	36x6	W																				
Akr-nMulti-Trk20	3 1/2	1995	4 x 5 1/2	34x5	34x5	B	Day-Elder, C	2 1/2	3125	4 1/2 x 5	36x4	36x7	W	Golden West, H	3 1/2	5090	4 1/2 x 6	36x6	36x6	W																					
All-Power, C	3 1/2	5800	4 1/2 x 6	36x7	36x10	W	Day-Elder, E	3 1/2	3950	4 1/2 x 5 1/2	36x5	36x5d	W	Golden West, T	4	5500	4 1/2 x 6	36x6	36x6	W																					
All-American, B-1	1 1/2	1795	3 1/2 x 5	32x4	32x4	I	Day-Elder, F	5	4875	4 1/2 x 6	36x5	36x6d	W	Golden West, K	7	6000	5 1/2 x 6	36x6	36x6	W																					
All-American C-1	1 1/2	2195	3 1/2 x 5	34x4	34x4	I	Dearborn, F	1 1/2	2180	3 1/2 x 5 1/2	34x4	34x5	W	Golden West, HA	7	6000	4 1/2 x 6	36x6	36x10	W																					
American, 25	2 1/2	3350	4 x 6	36x4	36x4d	W	Dearborn, 48	2	2590	3 1/2 x 5 1/2	35x5 1/2	34x7 1/2	W	Gove, A-1	2 1/2	....	4 1/2 x 5 1/2	36x4	36x7	I																				
American, 40	4	4275	4 1/2 x 6	36x5	36x5d	W	Defiance, G	1	1975	3 1/2 x 5	35x5 1/2	35x5 1/2	I	Graham Bros. A	1 1/2	2495	3 1/2 x 5	33x5 1/2	33x5 1/2	I																					
Ape, G	1 1/2	1675	3 1/2 x 5	33x5 1/2	33x5 1/2	W	Defiance, D	1 1/2	2550	3 1/2 x 5	35x5 1/2	36x6 1/2	I	Gramm-Bern, 10	1	1495	3 1/2 x 5	33x5 1/2	33x5 1/2	I																					
Ape, D	2 1/2	1915	3 1/2 x 5 1/2	34x3 1/2	34x4	I	Defiance, E	2	2750	3 1/2 x 5	35x5 1/2	36x7 1/2	I	Gramm-Bern, 15	1 1/2	2030	3 1/2 x 5	33x5 1/2	33x5 1/2	I																					
Ape, E	2 1/2	2695	4 1/2 x 5 1/2	36x4	36x7	W	DeKalb, E2 1/2	2	2600	4 1/2 x 5 1/2	36x4	36x6	W	Gramm-Bern, 45	1 1/2	2725	3 1/2 x 5	33x5 1/2	33x5 1/2	W																					
Ape, F	3 1/2	3975	4 1/2 x 6	36x5	36x10	I	DeKalb, E2	2 1/2	2250	4 1/2 x 5 1/2	34x3 1/2	36x5	W	Gramm-Bern, 20	2	3175	4 1/2 x 5 1/2	36x4	36x7	W																					
Armstrong, 20	1 1/2	....	3 1/2 x 5 1/2	34x3 1/2	34x5	W	DeMartini 1 1/2	2 1/2	2600	3 1/2 x 5	34x3 1/2	34x6	W	Gramm-Bern, 25	2 1/2	3575	4 1/2 x 5 1/2	36x4	36x4d	W																				
Armstrong, HW	3 1/2	....	4 1/2 x 5 1/2	36x4	36x7	W	DeMartini 2	2	3300	4 x 5 1/2	36x3 1/2	36x7	W	Gramm-Bern, 35	3 1/2	4375	4 1/2 x 5 1/2	36x5	40x5d	W																				
Armstrong, KW	3 1/2	....	4 1/2 x 5 1/2	36x5	36x5d	W	DeMartini 3	3	4250	4 1/2 x 5 1/2	36x4	36x10	W	Gramm-Bern, 50	5	5275	4 1/2 x 6	36x6	40x6d	W																				
Atco, B	1 1/2	....	3 1/2 x 5 1/2	34x5 1/2	36x6	I	DeMartini 4	4	4800	4 1/2 x 6	36x5	36x12	W	Hahn, J4	1	....	3 1/2 x 5	34x5	34x5	W																			
Atco, B1	1 1/2	....	3 1/2 x 5 1/2	34x5 1/2	36x6 1/2	I	Denby, 12	1	1625	3 1/2 x 5	35x5	36x8	I	Hahn, CD	1 1/2	....	4 1/2 x 5 1/2	36x3 1/2	36x6	W																			
Atco, A	2 1/2	....	4 1/2 x 5 1/2	36x4	36x8	I	Denby, 33	1 1/2	2300	3 1/2 x 5	35x5 1/2	36x7 1/2	I	Hahn, EE	2 1/2	....	4 1/2 x 5 1/2	36x4	36x8	W																			
Atlas, MLD	1	....	3 1/2 x 5	32x4 1/2	32x4 1/2	W	Denby, 134	2	2600	3 1/2 x 5	36x3 1/2	36x6	I	Hahn, F	3 1/2	....	4 1/2 x 5 1/2	36x5	36x10	W																			
Atterbury, 20R	1 1/2	2775	3 1/2 x 5	34x3 1/2	34x5	W	Denby, 25	3	3300	4 1/2 x 5 1/2	36x4	36x7	I	Hahn, EP	5	....	4 1/2 x 6	36x6	40x12	W																				
Atterbury, 7CX	2 1/2	3375	4 1/2 x 5 1/2	36x4	36x4d	W	Denby, 27	4	4200	4 1/2 x 5 1/2	36x5	36x5d	I	Hal Fur, E	1	2350	4 x 5	35x5 1/2	35x5 1/2	W																					
Atterbury, 7D	3 1/2	4175	4 1/2 x 5 1/2	36x5	40x5d	W	Denby, 210	5	4850	4 1/2 x 5 1/2	36x6	40x6d	I	Hal Fur, B	2 1/2	3250	4 1/2 x 5 1/2	35x5	36x7	W																					
Atterbury, 8E	3 1/2	5575	4 1/2 x 6	36x5	40x6d	W	Dependable, A	1 1/2	1650	3 1/2 x 5	34x5	36x6	W	Hal Fur, F	3 1/2	4200	4 1/2 x 5 1/2	36x6	40x10	W																					
Autocar, 21UF	1 1/2-2	2300	4 1/2 x 4 1/2	34x4	34x5	D	Dependable, C	1 1/2	2350	3 1/2 x 5 1/2	34x3 1/2	34x5	W	Hall	1 1/2	3100	3 1/2 x 5	34x5 1/2	35x7 1/2	W																					
Autocar, 21UG	1 1/2-2	2400	4 1/2 x 4 1/2	34x4	34x5	D	Dependable, D	2	2650	4 x 5 1/2	34x5	36x6	W	Hall	2 1/2	3275	4 1/2 x 5 1/2	36x4	36x6	W																					
Autocar, 26V	....	4350	4 1/2 x 5 1/2	34x5	36x10	D	Dependable, E	2 1/2	2950	4 1/2 x 5 1/2	36x4	36x7	W	Hall	3 1/2	4100	4 1/2 x 5 1/2	36x5	36x5d	W																				
Autocar, 26-B	....	4500	4 1/2 x 5 1/2	34x5	36x10	D	Dependable, G	3 1/2	3550	4 1/2 x 6	36x6	36x7	W	Hall	5	5100	4 1/2 x 5 1/2	36x5	40x6d	W																				
Available, H1 1/2	1 1/2	2750	4 x 5 1/2	36x3 1/2	36x5	W	Diamond-T, O	1	2500	3 1/2 x 5 1/2	34x5 1/2	36x6 1/2	W	Hall	7	5100	4 1/2 x 5 1/2	36x5	40x6d	C																					
Available, H2 1/2	1 1/2	3475	4 x 5 1/2	36x4	36x8	W	Diamond-T, FS	1 1/2	2960	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Harvey, WEA	1 1/2	2550	3 1/2 x 5 1/2	34x3 1/2	34x5	W																					
Available, H3 1/2	3 1/2	4475	4 1/2 x 5 1/2	36x5	40x5d	W	Diamond-T, T	1 1/2	3250	4 x 5 1/2	36x4	36x7	W	Harvey, WFA	2 1/2	3300	4 1/2 x 5 1/2	36x4	36x7	W																					
Available, H5	5	5475	4 1/2 x 6	36x6	40x12	W	Diamond-T, U	2 1/2	3285	4 x 5 1/2	36x4	36x7	W	Harvey, WHA	3 1/2	4300	4 1/2 x 6	36x5	36x5d	W																					
Available, H7	7	6000	5 x 6	36x6	40x14	W	Diamond-T, K	3 1/2	4675	4 1/2 x 5 1/2	36x5	36x5d	W	Harvey, WKA	5	5200	4 1/2 x 6	36x6	40x6d	W																					
Avery	1	1800	3 x 4	34x5 1/2	34x5 1/2	I	Diamond-T, EL	5	5400	4 1/2 x 5 1/2	36x6	40x6d	W	Hawkeye, K	1 1/2	1850	3 1/2 x 5 1/2	34x3 1/2	31x5	I																					
Beck, A. Jr.	2	2550	3 1/2 x 5	34x3 1/2	34x4	I	Diamond-T, S	5	5650	4 1/2 x 6	36x6	40x6d	W	Hawkeye, M	2	2650	4 1/2 x 5 1/2	36x4	36x6	I																					
Beck, C	1 1/2	2250	3 1/2 x 5 1/2	34x3 1/2	34x5 1/2	I	Diehl, A	1																																	

Specifications of Current Motor Truck Models—Continued

NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive
				Front	Rear						Front	Rear						Front	Rear	
Kelly-S, K-45	4	\$4550	4 1/2 x 6 1/2	36x5	40x6	C	Ordan, A1	1 1/2	\$2550	3 1/2 x 5	36x3 1/2	36x5	W	Service, 71	3 1/2	\$4285	4 1/2 x 5 1/2	36x5	36x5d	W
Kelly-S, K-50	5	4900	4 1/2 x 6 1/2	36x6	40x6d	C	Ordan, E	2 1/2	3250	4 1/2 x 5 1/2	36x4	36x7	W	Service, 76	3 1/2	4485	4 1/2 x 6	36x5	36x5d	W
Kelly-S, K-60	6	5100	4 1/2 x 6 1/2	36x6	40x7d	C	Old Hickory, W	1	2175	3 1/2 x 5	36x3 1/2	36x4	W	Service, 101	5	5275	4 1/2 x 6	36x6	40x6d	W
Keystone, 40	2	2450	3 1/2 x 5 1/2	34x5 1/2	38x7 1/2	I	Old Reliable, A	1 1/2	2350	4 x 5	34x4	36x6	W	Signal, NF	1	2475	4 1/2 x 6	34x5 1/2	36x6 1/2	W
Kimball, AB	2	2675	4 x 6	36x4	36x7	W	Old Reliable, B	2 1/2	3500	4 1/2 x 6	34x4	36x4d	W	Signal, H	1 1/2	2025	4 1/2 x 5 1/2	34x4	36x6	W
Kimball, AC	2 1/2	3975	4 1/2 x 6	36x4	36x8	W	Old Reliable, C	3 1/2	4250	4 1/2 x 6	36x5	36x5d	W	Signal, J	2 1/2	3275	4 1/2 x 5 1/2	34x4	36x8	W
Kimball, AK	3	4500	4 1/2 x 6	36x4	36x10	W	Old Reliable, D	5	5250	4 1/2 x 6	36x6	40x6d	W	Signal, M	3 1/2	4275	4 1/2 x 5 1/2	36x5	40x5d	W
Kimball, AE	4	5000	4 1/2 x 6	36x5	40x12	W	Old Reliable, E	7	6000	4 1/2 x 6 1/2	36x6	40x7d	C	Signal, R	5	5300	4 1/2 x 6	36x6	40x6d	W
Kimball, AF	5	5975	5 x 6	36x6	40x7d	W	Oldsmobile Econ.	1	1500	3 1/2 x 5 1/2	35x5 1/2	35x5 1/2	I	Southern, 10	1	2 91	3 1/2 x 5	34x3 1/2	34x4	I
Kissel, Express	1	1985 1/2	3 1/2 x 5 1/2	34x5 1/2	34x5 1/2	W	Olympic, A	2 1/2	3500	4 1/2 x 5 1/2	36x4	36x7	W	Southern, 15	1 1/2	2593	3 1/2 x 5 1/2	36x6 1/2	34x4	W
Kissel, Utility	1 1/2	2775	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Oneida, A-9	1 1/2	2350	3 1/2 x 5	36x3 1/2	36x5	W	Southern, 20	2	2990	4 1/2 x 5 1/2	36x6 1/2	40x8	W
Kissel, Freighter	2 1/2	3475	4 1/2 x 5 1/2	36x4	36x7	W	Oneida, B-9	1 1/2	2915	4 x 5 1/2	36x4	36x7	W	Standard, 1-K	1-1 1/2	1950	3 1/2 x 5	34x3 1/2	34x5	W
Kissel, H. D.	4	4475	4 1/2 x 5 1/2	36x5	36x5d	W	Oneida, C-9	2 1/2	3300	4 x 5 1/2	36x4	36x7	W	Standard, 76	2 1/2	3100	4 1/2 x 5 1/2	36x3 1/2	36x7	W
Kleiber, AA	1	2600	4 1/2 x 5 1/2	34x3 1/2	34x5	W	Oneida, D-9	3 1/2	4345	4 1/2 x 5 1/2	36x5	36x10	W	Standard, 66	3 1/2	4000	4 1/2 x 5 1/2	36x5	36x10	W
Kleiber, A	1 1/2	3100	4 1/2 x 5 1/2	36x3 1/2	36x6	W	Oneida, E-9	5	5460	4 1/2 x 5 1/2	36x6	40x12	W	Standard, 5-K	5-6	5250	4 1/2 x 6	36x6	4x12	W
Kleiber, BB	2	3600	4 1/2 x 5 1/2	36x4	36x7	W	Orleans, A	1 1/2	2780	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Sterling, 1 1/2	1 1/2	3200	4 x 5 1/2	36x3 1/2	36x5	W
Kleiber, B	2 1/2	4200	4 1/2 x 5 1/2	36x5	36x8	W	Orleans, B	2 1/2	3250	4 1/2 x 5 1/2	36x4	36x7	W	Sterling, 2	2	3500	4 x 5 1/2	36x4	36x6	W
Kleiber, C	3 1/2	4900	4 1/2 x 5 1/2	36x5	36x5d	W	Orleans, C	3 1/2	3750	4 1/2 x 5 1/2	36x4 1/2	36x8	W	Sterling, 2 1/2	2 1/2	3650	4 1/2 x 5 1/2	36x4	36x4d	W
Kleiber, D	5	5600	5 x 6 1/2	36x6	40x12	W	Orleans, D	5	4250	4 1/2 x 5 1/2	36x6	40x8	W	Sterling, 3 1/2	3 1/2	4050	4 1/2 x 5 1/2	36x5	4x8 1/2	W
Koehler, D	1 1/2	2700	3 1/2 x 5 1/2	34x5 1/2	34x5	W	Oshkosh, A	2	3750	3 1/2 x 5	36x6 1/2	36x6 1/2	4	Sterling, 5-W	5	5500	5 x 6 1/2	36x6	40x6d	C
Koehler, M	2 1/2	3100	4 x 5 1/2	36x4	36x7	W	Oshkosh, AA	2	3850	3 1/2 x 5	36x6 1/2	36x6 1/2	4	Sterling, 5-C	5	6000	5 x 6 1/2	36x6	40x6d	C
Koehler, MCS	2 1/2	3100	4 x 5 1/2	36x4	36x7	W	Oshkosh, B	2 1/2	4150	4 x 5 1/2	36x7 1/2	36x7 1/2	4	Sterling, 7 1/2	7 1/2	6500	5 x 6 1/2	36x6	40x7d	C
Koehler, F	3 1/2	3100	4 1/2 x 5 1/2	36x5	36x10	W	Oshkosh, BB	2 1/2	4300	4 x 5 1/2	36x7 1/2	36x7 1/2	4	Stewart, 11	1 1/2	1350	3 1/2 x 5 1/2	32x4 1/2	32x4 1/2	I
Koehler, MT, Trac	5	4 1/2	4 x 5 1/2	36x4	36x7	W	Packard, EC	...	3500	4 1/2 x 5 1/2	36x4	36x7	W	Stewart, 15	1 1/2	1875	3 1/2 x 5	35x5 1/2	35x5 1/2	I
L.M.C., 2-20	2 1/2	2540	4 1/2 x 5 1/2	36x4	36x4d	I	Packard, EF	...	4100	4 1/2 x 5 1/2	36x5	36x5d	W	Stewart, 9	1 1/2	2200	3 1/2 x 5	34x3 1/2	34x5	I
Lange, B	2 1/2	3350	4 1/2 x 5 1/2	36x4	36x6	C	Packard, EX	...	4500	5 x 5 1/2	36x6 1/2	40x6d	W	Stewart, 7	2	2900	4 1/2 x 5 1/2	34x4	34x7	I
Larabee, U	1 1/2	2400	3 1/2 x 5	34x3 1/2	34x5	W	Packard, FX	...	4000	4 1/2 x 5 1/2	36x6 1/2	40x8	W	Stewart, 7-X	2 1/2	2950	4 1/2 x 5 1/2	34x4	34x7	I
Larabee, K	2 1/2	3400	4 1/2 x 5 1/2	36x4	36x7	W	Paige, 52-19	1 1/2	2880	4 x 5 1/2	34x3 1/2	34x6	W	Stewart, 10	3 1/2	3850	4 1/2 x 5 1/2	36x5	36x5d	I
Larabee, L	3 1/2	4200	4 1/2 x 5 1/2	36x5	36x5d	W	Paige, 54-20	2 1/2	3400	4 1/2 x 5 1/2	34x4	34x4d	W	Stewart, 10-X	3 1/2	3850	4 1/2 x 5 1/2	36x5	36x5d	I
Larabee, W	5	5100	4 1/2 x 6	36x6	40x6d	W	Paige, 51-18	3 1/2	4285	4 1/2 x 5 1/2	36x5	36x5d	W	Stoughton, A	1	1095	3 1/2 x 5 1/2	34x4 1/2	35x5 1/2	W
Leon, L	1	2350	3 1/2 x 5 1/2	35x5 1/2	35x5 1/2	W	Parker, F20	2	3500	4 x 6	34x4	36x4d	W	Stoughton, B	1 1/2	2350	3 1/2 x 5 1/2	36x5	36x5	W
Leedinghaus, C	1	2100	3 1/2 x 5	35x5 1/2	35x5 1/2	W	Parker, J20	3 1/2	4400	4 1/2 x 6	36x5	40x5d	W	Stoughton, D	2	2800	4 x 5 1/2	36x4	36x7	W
Leedinghaus, W	1 1/2	2700	3 1/2 x 5 1/2	34x3 1/2	34x5	W	Parker, M20	5	5500	4 1/2 x 6	36x6	40x6d	W	Stoughton, F	3	3600	4 1/2 x 5 1/2	36x5d	36x5 1/2	W
Maccar, L	1 1/2	2925	4 1/2 x 5 1/2	36x4	36x7	W	Patriot, Reverse	1 1/2	1785	3 1/2 x 5	35x5 1/2	35x5 1/2	W	Sullivan, E	2	3350	4 1/2 x 5 1/2	36x4	36x7	W
Maccar, H-2	2 1/2	3750	4 1/2 x 5 1/2	36x1	36x4d	W	Patriot, Lincoln	1 1/2	2450	4 x 5 1/2	34x3 1/2	34x5	W	Sullivan, H	3 1/2	4650	4 1/2 x 6	36x5	36x5d	W
Maccar, M-2	3 1/2	4500	4 1/2 x 6	36x5	36x5d	W	Patriot, Washg'n	2 1/2	3450	4 1/2 x 5 1/2	36x4	36x7	W	Superior, D	1	1650	3 1/2 x 5	34x3 1/2	34x4	I
Maccar, G	5	5500	4 1/2 x 6	36x5	40x6d	W	Piedmont, 4-30	1 1/2	1685	3 1/2 x 5	34x4 1/2	34x4 1/2	W	Superior, E	2	2600	4 1/2 x 5 1/2	36x4	36x6	I
MacDonald, A	7 1/2	5750	4 1/2 x 6	40x7	40x14	I	Pierce-Arrow	2	3750	4 x 5 1/2	36x4	36x4d	W	Super Truck, 50	2 1/2	3300	4 x 6	36x4	36x8	W
Mack, AB D.R.	1 1/2	3450	4 x 5	36x4	36x3 1/2d	D	Pierce-Arrow	3 1/2	4950	4 1/2 x 6 1/2	36x5	36x5d	W	Super Truck, 70	3 1/2	4300	4 1/2 x 6	36x5	40x5d	W
Mack, AB	2 1/2	3400	4 x 5	36x4	36x4d	C	Pioneer, 50	5	5700	4 1/2 x 6 1/2	36x5	40x6d	W	Super Truck, 100	5	5300	4 1/2 x 6	36x5	40x12	W
Mack, AB Chain	1 1/2	3000	4 x 5	36x4	36x3 1/2d	C	Pontiac, B 21	2 1/2	3800	4 1/2 x 5 1/2	36x5	36x7	W	Super Truck 150	7 1/2	6100	5 x 6	36x6	40x7d	W
Mack, AC Chain	2	3300	4 x 5	36x4	36x4d	C	Pony	1 1/2	400	2 1/2 x 4	28x3 1/2	28x3 1/2	C	Texas, A38	1 1/2	1095	3 1/2 x 5	33x4	33x4	I
Mack, AC D.R.	2	3750	4 x 5	36x4	36x4d	D	Power, F	1 1/2	...	3 1/2 x 5 1/2	36x6	36x6	W	Texas, TK39	1 1/2	1550	3 1/2 x 5	36x6	36x7	W
Mack, AC Chain	3 1/2	4950	5 x 6	36x5	40x5d	C	Power, C	3 1/2	...	4 1/2 x 5 1/2	36x5	40x10	W	Tiffin, GW	2 1/2	2695	4 1/2 x 5 1/2	36x3 1/2	36x5	W
Mack, AC Chain	5	5500	5 x 6	36x6	40x6d	C	Premcar, B-143	1 1/2	2175	3 1/2 x 5	36x6 1/2	36x6 1/2	W	Tiffin, MW	2 1/2	3580	4 1/2 x 5 1/2	36x4	26x3 1/2	W
Mack, AC Chain	6 1/2	5750	5 x 6	36x6	40x12	C	Rainier, R-11	2 1/2	2150	3 1/2 x 5	35x5 1/2	35x5 1/2	W	Tiffin, PW	3 1/2	4700	4 1/2 x 5 1/2	36x5	40x5d	W
Mack, AC Chain	7 1/2	6000	5 x 6	36x7	40x7d	C	Rainier, R-19	2 1/2	2350	3 1/2 x 5	34x3 1/2	34x4	W	Tiffin, F50	5	5850	4 1/2 x 6	36x6	40x6d	W
Mack Trac, AB	5	3400	4 x 5	36x4	36x4d	C	Rainier, R-16	1 1/2	2600	3 1/2 x 5	34x3 1/2	34x5	W	Tiffin, F60	6	6050	4 1/2 x 6	36x6	40x12	W
Mack Trac, AC	7	4950	5 x 6	36x5	40x5d	C	Rainier, R-18	2	2950	4 1/2 x 5 1/2	34x4	34x6	W	Titan, HT	3	4550	4 1/2 x 6	34x4	40x5d	I
Mack Trac, AC	10	5500	5 x 6	36x6	40x6d	C	Rainier, R20	2 1/2	3600	4 1/2 x 5 1/2	34x4	34x7	W	Titan, HS	5	5400	4 1/2 x 6	36x5	40x6d	I
Mack Trac, AC	13	5750	5 x 6	36x6	40x12	C	Rainier, R15	3 1/2	4500	4 1/2 x 5 1/2	36x5	36x5d	W	Titan, TD	2 1/2	3400	4 1/2 x 6 1/2	34x4	50x4 1/2	I
Mack Trac, AC	15	6000	5 x 6	36x7	40x7d	C	Rainier, R17	5	5250	4 1/2 x 6	36x6	36x6d	W	Tower, J	1 1/2	3000	4 1/2 x 5 1/2	35x5	35x7	W
Mapielaf, AA**	2	4150	4 x 5 1/2	36x4	36x7	W	Ranger, TK-20-2	2	...	3 1/2 x 5	36x6 1/2	36x6 1/2	B	Tower, J	3 1/2	3475	4 1/2 x 5 1/2	36x4	36x7	W
Mapielaf, BB**	3	4775	4 1/2 x 5 1/2	36x4	36x4d	W	Rao, F	4-11	1385	4 1/2 x 4 1/2	34x4 1/2	34x4 1/2	B	Tower, G	3 1/2	4400	4 1/2 x 5 1/2	36x5	36x5d	W
Mapielaf, CC**	4	5770	4 1/2 x 5 1/2	36x5	36x5d	W	Reliance, 10A	1 1/2	2500	4 x 5 1/2	36x3 1/2	36x5	I	Transpart, 20	1 1/2	1850	3 1/2 x 5 1/2	34x3 1/2	34x4	I
Mapielaf, DD**	5	6825	4 1/2 x 5 1/2	36x6	40x6d	W	Reliance, 20B	2 1/2	3200	4 1/2 x 5 1/2	36x4	36x4d	I	Transpart, 30	1 1/2	2250	3 1/2 x 5	36x3 1/2	36x5	I

Specifications of Current Motor Truck Models—Continued

NAME AND MODEL	Tons Capacity	Chassis Price	Eng. and Stroke	TIRES	Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Eng. and Stroke	TIRES	Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Eng. and Stroke	TIRES	Final Drive
Ward-LaF., 5A	5	\$5590	5 x 6 1/2	36x6 36x6d	W	Wichita, O	3 1/2	\$4000	4 1/2 x 6	36x5 36x5d	W	Winther, 430	1 1/2	\$2550	3 1/2 x 5	32x4 32x4	I
Watson, B	1	1865	3 1/2 x 5 1/2	34x4 1/2 31x4 1/2	W	Wichita, S	5	5000	4 1/2 x 6	36x6 40x6d	W	Winther, 39	1 1/2	2450	3 1/2 x 5	34x3 1/2 34x5	I
Watson, N	3 1/2	4250	4 1/2 x 5 1/2	36x5 36x10	W	Wilcox, AA	1	2100	3 1/2 x 5 1/2	36x4 36x4	W	Winther, 49	2	3250	4 x 5	34x4 34x4d	I
Western, W1 1/2	1 1/2	2350	4 1/2 x 5 1/2	36x3 1/2 36x5	W	Wilcox, B	1 1/2	2775	4 1/2 x 5	36x4 36x5	W	Winther, 70	3 1/2	4200	4 x 6	36x5 36x5d	I
Western, L1 1/2	1 1/2	2550	3 1/2 x 5	36x3 1/2 36x5	W	Wilcox, D	2 1/2	3300	4 1/2 x 5	36x4 36x3 1/2	W	Winther, 450	4	3690	4 x 5	36x5 36x6	I
Western, W2 1/2	2 1/2	3250	4 1/2 x 5 1/2	36x4 36x7	W	Wilcox, E	4 1/2	4250	4 1/2 x 6	36x5 36x5d	W	Winther, 100	5	5250	4 1/2 x 6	36x6 40x5d	I
Western, L2 1/2	2 1/2	3250	4 1/2 x 6	36x4 36x7	W	Wilcox, F	5	5200	4 1/2 x 6 1/2	36x5 40x6d	W	Winther, 140	7	5900	5 x 6	36x6 40x7d	I
Western, W3 1/2	3 1/2	4250	4 1/2 x 6	36x5 40x5d	W	Wilson, F	1 1/2	2270	3 1/2 x 5	36x3 1/2 36x5	W	Wisconsin B	1	1950	4 x 5 1/2	34x5 34x5 1/2	W
White, 15	3 1/2	2400	3 1/2 x 5 1/2	34x5 34x5 1/2	B	Wilson, EA	2 1/2	2825	4 1/2 x 5 1/2	36x4 36x7	W	Wisconsin C	1 1/2	2250	4 1/2 x 5 1/2	34x5 36x6 1/2	W
White, 20	2	3250	3 1/2 x 5 1/2	36x4 36x7	D	Wilson, G	3 1/2	3685	4 1/2 x 5 1/2	36x5 36x5d	W	Wisconsin D	2 1/2	3500	4 1/2 x 6 1/2	36x6 36x10	W
White, 40	3 1/2	4200	3 1/2 x 5 1/2	36x5 40x5d	D	Wilson, H	5	4520	4 1/2 x 6	36x6 40x6d	W	Wisconsin E	3 1/2	4000	5 x 6 1/2	36x6 36x12 1/2	W
White, 45	5	4500	4 1/2 x 5 1/2	36x6 40x6d	D	Winther, 751	3 1/2	1795	3 1/2 x 5	34x4 1/2 35x5 1/2	J	Witt-Will, N	1 1/2	2750	3 1/2 x 5	36x3 1/2 36x5	W
White Hick., E	1 1/2	2450	3 1/2 x 5	34x5 34x5 1/2	W							Witt-Will, P	2 1/2	3250	4 1/2 x 5 1/2	36x3 1/2 36x7	W
White Hick., H	1 1/2	2750	3 1/2 x 5	34x5 34x5 1/2	W							Wolverine, J	1	2125	3 1/2 x 5	34x5 34x4	I
White Hick., K	2 1/2	3350	4 1/2 x 5 1/2	36x4 36x5	W							Wolverine, J	1 1/2	2375	3 1/2 x 5	34x3 1/2 34x5	I
Wichita, K	1	2300	3 1/2 x 5	36x3 1/2 36x4	W							Wolverine, J	2	2640	3 1/2 x 5	34x4 34x7	I
Wichita, L	1 1/2	2600	3 1/2 x 5 1/2	36x3 1/2 36x5	W							Wolverine, J	2 1/2	3425	4 1/2 x 5 1/2	36x5 36x10	I
Wichita, M	2	2800	3 1/2 x 5 1/2	36x3 1/2 36x6	W							Wolverine, L	3 1/2	4100	4 1/2 x 5 1/2	36x5 36x10	I
Wichita, R	2 1/2	3000	3 1/2 x 5 1/2	36x4 36x7	W							Yellow Cab M21	1 1/2	2050	3 1/2 x 5	32x4 32x4	B
Wichita, RX	2 1/2	3600	4 1/2 x 6	36x4 36x8	W							Yellow Cab M41	1 1/2	2350	3 1/2 x 5	34x4 1/2 34x4 1/2	W

*2-cyl. †6-cyl. ‡8-cyl. All others, not marked, are 4-cyl. Trac., Tractor. **Canadian made.
Final Drive: W—Worm, I—Internal Gear, C—Chain, D—Double Reduction, B—Bevel, 4—Four-Wheel, E—External Gear. *Tires—optional. †Pneumatic Tires. All others solid. ‡Price includes body. §—Price includes several items of equipment.

Farm Tractor Specifications and Prices

TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Plov Capacity	TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Plov Capacity	TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Plov Capacity	
All-In One.....	16-30	\$1975	3	Clim.	4-5 x 6 1/2	GDK	3-4	Gray..... 1920	18-36	\$2000	3	Wauk	4-4 1/2 x 6 1/2	Gas.	4	Port Huron..... A	12-25	\$1700	4	Chief	4-4 1/2 x 6	G.K.	3	
Allis-Chalm. B	6-12	925	2	LeR.	4-3 1/2 x 4 1/2	Gas.	1	Ground Hog.....	19-31	2000	4	Erd.	4-4 x 6	GorK	3	Post..... D	12-20	1800	4	Wauk	4-4 1/2 x 5 1/2	GorK	2	
Allis-Chalm. G.P.	6-12	850	2	LeR.	4-3 1/2 x 4 1/2	Gas.	1-2	Gt. Western St.....	20-30	1950	4	Beav.	4-4 1/2 x 6	K.	4	Prairie Dog..... L	9-18	650	3	Wauk	4-3 1/2 x 5 1/2	Gas.	2	
Allis-Chalm. H	12-20	1495	2	Mid. W	4-4 1/2 x 5 1/2	Gas.	2-3									Prairie Dog..... D	15-30	1250	4	Wauk	4-4 1/2 x 6 1/2	Gas.	3	
Allis-Chalm. I	18-30	2150	4	Own	4-4 1/2 x 6 1/2	GorK	3-4	Hart-Parr..... 20	20	995	4	Own	2-5 1/2 x 6 1/2	K.D.	3	Ranger Cal.....	8-16		4	LeR.	4-3 1/2 x 4 1/2	Gas.	1	
Allis-Chalm. J	10-18	875	4	Own	4-4 1/2 x 5 1/2	G.K.	4	Hart-Parr..... 30	30	1585	4	Own	2-6 1/2 x 7	K.D.	3	Reed..... T-20	8-16		4	Dom	4-4 1/2 x 6	K.	3-4	
Allwork..... 2-G	14-28	1875	4	Own	4-4 1/2 x 6	GorK	3	Heider..... D	9-18	1170	4	Wauk	4-4 1/2 x 5 1/2	G.K.	3	Reed..... A-1	18-36	2400	4	Dom	4-5 x 10	Gas.	4	
Allwork..... C	14-28	1875	4	Own	4-5 x 6	GorK	3	Heider..... C	12-20	1395	4	Wauk	4-4 1/2 x 6 1/2	G.K.	3	Reliable.....	10-20	985	4	Own	2-6 x 7	Ker.	2	
Andrews-Kin.D	18-36	2500	4	Clim.	4-5 x 6 1/2	GorK	4	Heider..... Cult	6-10	1050	4	LeR.	4-3 1/2 x 4 1/2	Gas.	1	Rex.....	12-25	1600	4	Wauk	4-4 1/2 x 5 1/2	GorK	3	
Appleton.....	12-20	1500	4	Buda	4-4 1/2 x 5 1/2	G.K.	2-3	Hicks.....	20-30		4	Wauk	4-4 1/2 x 6	GorK	3	Russell.....	12-24	1500	4	Own	4-4 1/2 x 5 1/2	GorK	2-3	
Are..... 1921	3-5	550	4	Own	1-4 1/2 x 5	Gas.	1	Huber Light 4.....	12-25	1185	4	Wauk	4-4 1/2 x 5 1/2	GorK	3	Russell.....	15-30	2200	4	Own	4-5 x 6 1/2	GorK	3-4	
Aultman-T.....	15-30	2200	4	Clim.	4-5 x 6 1/2	G.K.	4	Huber Super 4.....	15-30	1885	4	Mid. W	4-4 1/2 x 6	Gas.	3	Russell.....	20-35	3000	4	Own	4-6 1/2 x 7	GorK	4-5	
Aultman-T.....	22-45	3850	4	Own	4-5 1/2 x 8	G.K.	6	Illinois Super.....	18-36	2500	4	Clim.	4-5 x 6 1/2	G.K.	4	Samson..... M		995	4	Nov.	4-4 x 5 1/2	G.K.	2	
Aultman-T.....	30-60	5000	4	Own	4-7 x 9	G.K.D	8	Imperial..... C	40-70	5000	4	Own	4-7 1/2 x 9	G.K.D	10	Sandusky..... J	10-20	1250	4	Own	4-4 1/2 x 5 1/2	G.K.D	2	
Automet. B-3.....	12-24	1785	4	Herc.	4-4 x 5 1/2	Gas.	2-3	Indiana..... F	8-10		2	LeR.	4-3 1/2 x 4 1/2	Gas.	1-2	Sandusky..... E	15-35	1750	4	Own	4-5 x 6 1/2	G.K.D	2	
Avery, SR, Cal.....	5-10		4	Own	4-3 x 4	G.K.	2	International.....	8-16	900	4	Own	4-4 1/2 x 5	G.K.D	2	Shawnee Com.....	6-12		2	LeR.	4-3 1/2 x 4 1/2	Gas.	10	
Avery, Cult-C.....	5-10		3	Own	4-3 x 4	G.K.	2	International.....	15-30	1750	4	Own	4-5 1/2 x 8	G.K.D	4	Shawnee Com.....	6-12		2	Gray	4-3 1/2 x 5	G.K.	3	
Avery..... B	5-10		4	Own	4-3 x 4	G.K.	2	J-T.....	18-40	3485	2	Chief	4-4 1/2 x 6	G.K.D	3-4	Shelby..... D	15-30		4	Beav.	4-4 1/2 x 6	G.K.	3	
Avery..... C	8-16		4	Own	2-5 1/2 x 6	G.K.D	2-3	Klumb..... F	16-32	1650	4	Clim.	4-5 x 6 1/2	Gas.	4-6	Shelby..... C	10-20		4	Pril.	4-4 x 6	GorK	2-3	
Avery.....	12-20		4	Own	2-6 1/2 x 7	G.K.D	2-3	Knudsen, 1920.....	25-45	2500	4	Own	4-5 x 9	Gas.	4-6	Short Turn.....	20-40	1500	3	Beav.	4-4 1/2 x 6	G.K.	3	
Avery.....	12-25		4	Own	2-6 1/2 x 7	G.K.D	2-3	LaCrosse..... M	6-12	900	4	Own	2-4 x 6	G.K.	3	Square 1..... A	18-35	2075	3	Clim.	4-5 x 6 1/2	G.K.	3	
Avery.....	14-28		4	Own	4-4 1/2 x 7	G.K.D	3-4	LaCrosse..... G	12-24	1250	4	Own	2-6 x 7	GorK	3	Steady Pull.....	12-24	1485	4		4-4 x 6	Gas.	3	
Avery.....	18-36		4	Own	4-4 1/2 x 7	G.K.D	3-4	Lausson.....	12-25	1495	4	Mid. W	4-4 1/2 x 5 1/2	Gas.	3	Stinson..... 4E	18-36	1835	4	Beav.	4-4 1/2 x 6	G.K.	4	
Avery.....	25-50		4	Own	4-6 1/2 x 7	G.H.D	5-6	Lausson.....	15-25	1685	4	Beav.	4-4 1/2 x 5 1/2	GorK	3-4	Stone.....	20-40	2250	4	Beav.	4-4 1/2 x 6	G.K.	4	
Avery.....	45-65		4	Own	4-7 1/2 x 8	G.K.D	8-10	Lausson.....	15-30	1885	4	Beav.	4-4 1/2 x 6	GorK	3-4	Tiga.....	15-27	2625	4	Wisc.	4-4 1/2 x 6	Gas.	3-4	
Bates.....	15-25		4	Own	4-4 1/2 x 6	Ker.	3	Lausson.....	21	1500	1085	4	Beav.	4-4 1/2 x 6	GorK	3-4	Titan.....	10-20	900	4	Own	2-6 1/2 x 7	G.K.D	3
Bates Mule H.....	15-25		4	Mid. W	4-4 1/2 x 5 1/2	Gas.	3	Leader.....	12-18	1095	4	Own	2-6 x 6 1/2	G.K.D	2-3	Topp..... B	30-45	3500	4	Wauk	4-4 1/2 x 6 1/2	Gas.	3-4	
Bates Mule F.....	18-25		4	Mid. W	4-4 1/2 x 6	Gas.	3	Leader.....	16-32	1985	4	Clim.	4-5 x 6 1/2	G.K.	3-4	Tore Cultivator.....	6-10		3	LeR.	4-3 1/2 x 4 1/2	Gas.	2	
Bates Mule G.....	25-35		4	Mid. W	4-4 1/2 x 6	Gas.	3	Leader.....	18-35	2775	2	Clim.	4-5 1/2 x 6 1/2	G.K.	3-4	Towson.....	10-20	1200	2	Own	4-6 1/2 x 7	Ker.	2-3	
Beau.....	8-16		4	Own	4-3 1/2 x 4	G.K.	2-3	Leonard.....	20-30	2530	4	Buda	4-4 1/2 x 6 1/2	G.K.	3-4	Towson.....	15-30	1800	2	Own	4-7 x 8	Ker.	3-4	
Beeman..... G	2-4	315	4	Own	1-3 1/2 x 4 1/2	Gas.	1	Liberty.....	18-24	2475	4	Clim.	4-5 x 6 1/2	G.K.	4	Town and.....	25-50	3000	2	Own	4-8 1/2 x 10	Gas.	4-8	
Best.....	30		4	Own	4-4 1/2 x 6 1/2	G.K.D	8-9	Linn..... H4J	40	4500	4	Cont.	4-4 1/2 x 5 1/2	Gas.	4	Traction Motor.....	40-50		4	Own	8-3 1/2 x 5	Gas.	4-5	
Best.....	60		4	Own	4-6 1/2 x 8 1/2	G.K.D	8-9	Linn..... W	60	5100	4	Wauk	4-5 x 6 1/2	K.	6	Traylor..... TB	6-12	715	4	LeR.	4-3 1/2 x 4 1/2	Gas.	1	
Boring..... 1921	15-30	1650	3	Wauk	4-4 1/2 x 5 1/2	GorK	2	Little Giant.....	16-22	2200	4	Own	4-5 1/2 x 6	K.	6	Triumph.....	18-36	2450	2	Erd.	4-4 1/2 x 6	Ker.	4	
Burn-On..... 1921	15-30	1650	4	Own	2-6 1/2 x 7	Ker.	3-4	Little Giant.....	26-35	3300	4	Own	6-5 1/2 x 6 1/2	Gas.	18	Truax.....	10-20	3750	2	Wauk	4-5 x 6 1/2	GorK	4	
Capital.....	15-30	1000	2	Own	4-4 x 3 1/2	Gas.	3	Lombard.....	85-150		2		4-4 1/2 x 6 1/2	Gas.	6-10	Turner..... 1921	14-25	1295	4	Buda	4-4 1/2 x 5 1/2	G.K.	3	
Case.....	10-18	1090	4	Own	4-3 1/2 x 5	GorK	2	Lombard.....	50		2					Twin City.....	12-20		4	Own	4-4 1/2 x 6	G.K.	3	
Case.....	15-27	1080	4	Own	4-4 1/2 x 6	GorK	3	Magnet..... B	14-28	1875	4	Wauk	4-4 1/2 x 6 1/2	K&G	3	Twin City.....	20-35		4	Own	4-4 1/2 x 6	G.K.	3	
Case.....	22-40	3100	4	Own	4-6 1/2 x 6 1/2	GorK	4-5	Master Jr.....	5-10	585	2	LeR.	4-2 1/2 x 4	Gas.	3	Twin City.....	40-65		4	Own	4-7 1/2 x 9	G.K.	8	
Caterpillar T11	25		2	Own	4-4 1/2 x 6	Gas.	4	Merry Gar1921	2	230	2	Evlin	1-2 1/2 x 2 1/2	Gas.	3	Uncle Sam C20	12-20	1385	4	Weid.	4-4 x 5 1/2	GorK	2-3	
Caterpillar T16	40		2	Own	4-6 1/2 x 6 1/2	GorK	4-5	Minne All-P	12-25	1200	4	Own	4-4 1/2 x 7	GorK	3	Uncle Sam B19	20-30	2300	4	Beav.	4-4 1/2 x 6	GorK	3-4	
Centaur.....	6-2 1/2	455	2	NWay	2-1 1/2 x 4 1/2	GorK	1-9	Minne Gen.P	17-30	1850	4	Own	4-4 1/2 x 7	GorK	3-4	Uncle Sam D21	20-30	1985	4	Beav.	4-4 1/2 x 6	GorK	3-4	
Chase.....	12-25	2100	3	Buda	4-4 1/2 x 5 1/2	G.K.D	2-3	Minne.....	12-30		4	Own	4-4 1/2 x 7	GorK	3-4	Universal.....	1-4	475	2	Own	1-3 1/2 x 5	Gas.	1	
Chicago..... 40	40	2500	4	Own	4-4 1/2 x 6	Gas.	4	Med.Duty	22-44	3300	4	Own	4-6 x 7	GorK	5-6	Utilitor..... 501	2 1/2	380	4	Own	1-3 1/2 x 4 1/2	Gas.	5-6	
Cletrac..... W	12-20	1495	2	Own	4-4 x 5 1/2	G.K.D	2-3	Minne.....	35-70	4800	4	Own	4-7 1/2 x 9	GorK	8-9	Valie. Bitwelt	12-24	1750	4	Own	4-4 1/2 x 5 1/2	G.K.D	3	
Dakota..... 4	15-27	1750	3	Dom.	4-4 1/2 x 6	Gas.	3-4	HeavyDuty	8-16	785	4	Light	4-3 1/2 x 4 1/2	GorK	1-2	Victory..... 1921	9-18	1350	4	Gray.	4-3 1/2 x 5	Gas.	2	
Dart..... B.J.	15-30	2100	4	Buda	4-4 1/2 x 6	Gas.	3-4	Mohawk 1921	9-18	1075	2	Own	4-3 1/2 x 5	Gas.	2-3	Victory..... 1921	15-30	1750	4	Wauk	4-4 1/2 x 5 1/2	G.K.	3	
Depue..... A	20-30	2500	4	Buda	4-4 1/2 x 6	Gas.	3	Moline Univ D	9-18	1785	2	Own	1-2 1/2 x 3 1/2	Gas.	3	Vim.....	15-30	1650	4	Wauk	4-4 1/2 x 5 1/2	G.K.	3	
Dill..... D	20	2180	4	Cont.	4-4 1/2 x 5 1/2	Gas.	3	Moline Orch	9-18	1075	2	Own	1-2 1/2 x 3 1/2	Gas.	3	Wallis..... K	15-25	1600	4	Own	4-4 1/2 x 5 1/2	G.K.	3	
Doll..... R.W.	20	2980	4	Mid. W	4-4 1/2 x 5	Gas.	3	Moter Macalt.	1 1/2	195	2	Own	1-2 1/2 x 3 1/2	Gas.	3	Waterloo.....	12-25		4	Own	2-6 1/2 x 7	G.K.D	3	
Do-Is-All.....	-7	595	4	Own	1-4 1/2 x 5	Gas.	3	Motex.....	15-30	2250	4	Buda	4-4 1/2 x 6	Gas.	3-4	Webfoot..... N3	28-53	5250	2	Wisc.	4-5 1/2 x 7	G.D	6	
Eagle..... F	12-22	1390	4	Own	2-7 x 8	GorK	3-4	NB..... 1	3-6	425	4	Own	2-3 1/2 x 4	Gas.	3	Wellington..... B	12-22	900	4	Erd.	4-4 x 6	Ker.	2-3	
Eagle..... F	16-30	1850	4	Own	2-8 x 8	GorK	4-5	NB..... 2	3-6	425	4	Own	2-2 1/2 x 4	Gas.	3	Wellington..... F	16-30	1400	4	Chief	4-4 1/2 x 6	Ker.	3-4	
E-B..... AA	12-20	1445	4	Own	4-4 1/2 x 6	GorK	3	Nichols Shop.....	20-42	3100	4	Own	8 x 10	GorK	3-6	Wellington..... 1920	16-32	2100	4	Clim.	4-5 1/2 x 6	G.K.	4	
E-B..... Q	12-20	925	4	Own	4-4 1/2 x 5	GorK	3	Nichols Shop.....	25-50	3460	4	Own	9 x 12	GorK	4-7	Westmore.....	12-25	1650	4	Wauk	4-4 x 5 1/2	G.K.	3	
E-B.....	16-32	2000	4	Own	4-5 1/2 x 7	GorK	4	Nichols Shop.....	25-50	3460	4	Own	9 x 12	GorK	4-7	Wharthen..... E	12-20	1800	3	Buda	4-4 1/2 x 5 1/2	Gas.	2	
Evans.....	18-30	2000	4	Buda	4-4 1/2 x 6	G.K.	3	Nilson Jr..... E	15-25	1775	4	Wauk	4-4 1/2 x 5 1/2	GorK	3	Whitney.....	9-18	1175	4	Own	2-6 1/2 x 6	Gas.	2	
Fagool..... D	9-12	1525	4	Lyc.	4-3 1/2 x 5	Gas.	2	Nilson Senior.....	20-40	2475	5	Wauk	4-5 x 6 1/2	G.K.	3	Wichita..... T	15-30	2500	4	Beav.	4-4 1/2 x 6	G.K.D	3-4	
Farm Horse. B	18-30	1885	4	Clim.	4-5 x 6 1/2	G.K.	3-4	Oil Pull..... K	12-20	1485	4	Own	2-6 x 8	K.D	3	Wisconsin..... E	16-30	2250	4	Clim.	4-5 x 6 1/2	Ker.	4	
Farquhar.....	15-25																							

MOTOR WORLD

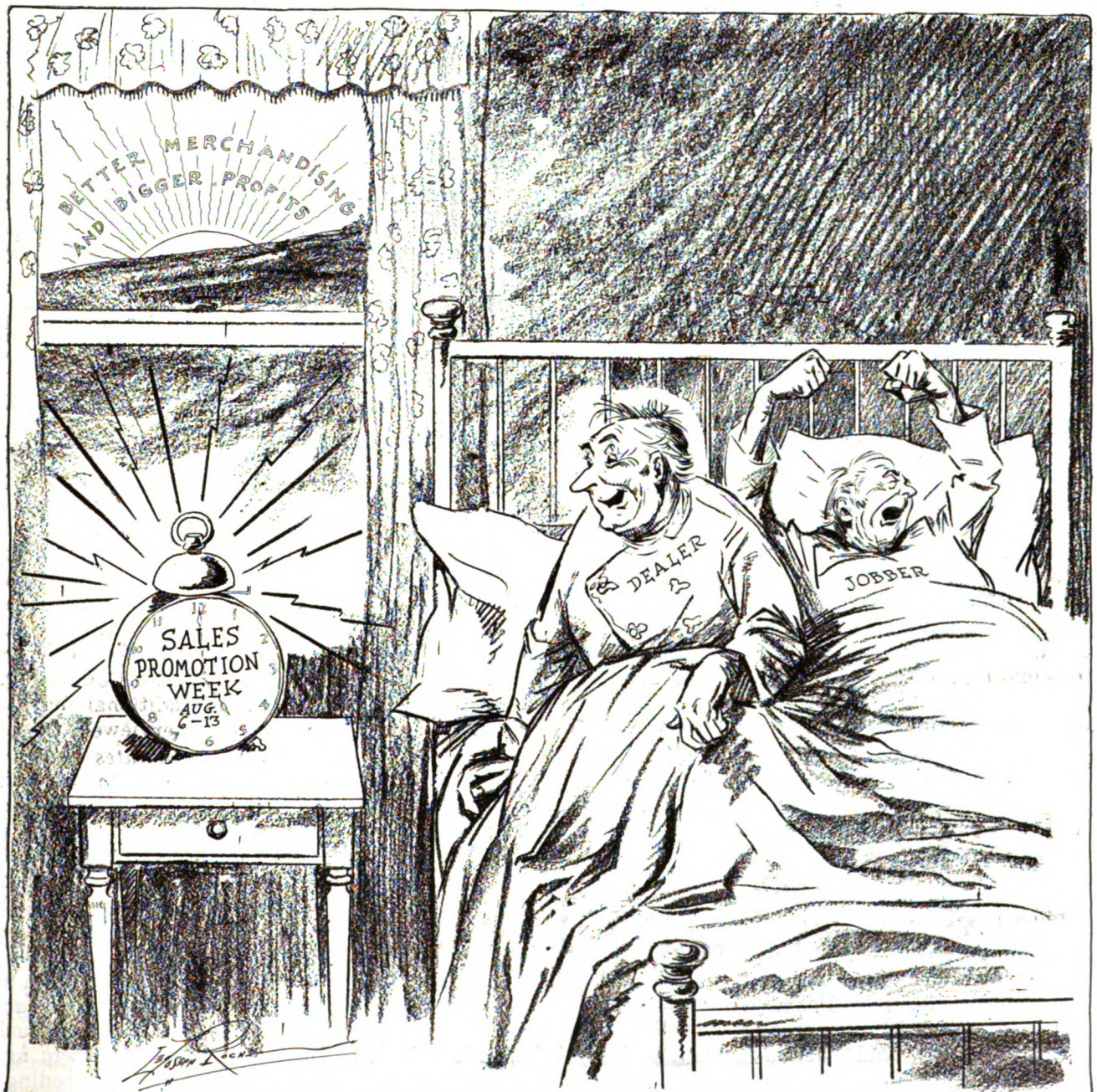
for
DEALERS, JOBBERS AND GARAGEMEN

Vol. LXVIII

New York, U. S. A., Wednesday, August 3, 1921

No. 5

Getting Them Up for the Big Job Ahead



**Automotive
Equipment
Sales Promotion
Week
Aug. 6-13**

5 THINGS

YOU may have heard of the merry-go-round operator who induced his employees, who were profit-sharers in the business, to work ten minutes overtime every day, closing the works at 10.40 instead of 10.30 p. m. At the end of a year it was found that 36,500 people—100 a day—had bought rides at five cents each during the extra ten minutes, yielding the merry-go-round people \$1,825 in extra revenues.

Before the innovation the merry-go-round had always stopped with sizable crowds on and around the machine. The fun had to stop sometime, and 10.30 had always been the time. Running until 10.40 gave the crowd ten minutes more fun and the operators ten minutes more revenue. The business, in latent form, was there. Extra effort made extra profits.

Dealers and garagemen who have made money on automotive equipment have found that extra effort was a requirement—not necessarily extra expense, because accessories often have been sold in volume without any addition to the cost of running a dealer or garage business. But the retailer has had to have more than the *desire* to make accessory profits. He has had to *exert effort* to sell them.

THE Automotive Equipment Association has inaugurated a sales promotion campaign which is intended to educate manufacturers, jobbers and dealers in the business of selling the products of the industry. It has decided to introduce the campaign with a Sales Promotion Week, August 6-13. The week offers the industry, and particularly jobbers, their salesmen and the retailers, an opportunity to get

started along the way of extra effort in merchandising accessories.

Sales Promotion Week can be made a big week for the trade, with jobber salesmen and dealers leading the procession toward better merchandising and bigger profits.

While the A. E. A. sales promotion committee merchandising directors are working out the plans the trade can be preparing itself to co-operate by working out *momentum in accessory selling*.

Dealers, points of contact with the buying public, hold the key to the situation, but jobber salesmen,

Sales Promotion

Use the week of Aug. 6-13 to get under way for your share of work in the A.E.A. campaign.

points of contact for the industry with the retailers, can work with them to make Sales Promotion Week an initial factor in the assured success of the sales promotion campaign—and a week of bigger profits for everybody.

THERE are many things jobber salesmen and dealers can do to make Sales Promotion Week more than a name. For convenience's sake FIVE THINGS might be suggested—FIVE THINGS for the jobber salesman to do and FIVE THINGS for the dealer to do.

The jobber salesman's earnings depend on his sales and his sales depend on his dealers' sales of merchandise bought from him. Extra effort by the jobber salesman will help the dealer sell and so boost the

salesman's earnings, not only throughout Sales Promotion Week, but afterward, if the extra effort, proven profitable by the single week's experience, is continued.

Throughout Sales Promotion Week the jobber salesman can—

1—*See more people every day*, which means a chance, at least, to make more sales. Most jobber salesmen contend that their day is long enough as it is, which generally is a true contention, but for one week many of them could put in an extra hour or two a day, doing perhaps seven days' work in five and reaping benefits in additional contacts and additional sales.

2—*Talk ten minutes with every dealer called upon on the opportunities for profit in lines the dealer does not handle*. Most dealers need considerable persuasion to take on lines with which they are not familiar, and in not all cases do jobber salesmen lay the stress they might on the opportunities for profit in those lines. Some salesmen may be surprised at the results obtained by systematically talking ten minutes during the week of August 6-13 on this phase of taking on additional lines with *every dealer interviewed*.

3—*Talk ten minutes with every dealer seen on how to sell certain profitable lines he is carrying but is not selling in satisfactory quantities*. Jobber salesmen know and if they don't know could find out in most cases the best kind of selling activity and talk for certain accessories. If a dealer is not making headway with a certain accessory or accessories they can ask him about his selling methods on those articles, check them against methods which are succeeding elsewhere and give him the benefit of

For Jobber Salesmen For Dealers

To Do in Order to Profit
by Sales Promotion Week

Automotive
Equipment
Sales Promotion
Week
Aug 6-13

others' successful experience. Results from ten minutes of such extra effort with *every* dealer interviewed also may be surprising.

4—*Talk ten minutes with every dealer called upon on the profit opportunities in pushing, week by week, different accessories or groups of accessories.* Show these dealers how to display, advertise and call to customers' attention one specialty one week and one another and show how such extra efforts have made money for dealers in many towns and cities.

5—*Talk with every dealer interviewed about window displays, and if a dealer needs help to dress a window and indicates that he is willing to learn, help him dress a window.* It is not necessary to comment on the possibilities of this extra effort—"What a man sees, he wants."

THE jobber salesman's part in Sales Promotion Week and the sales promotion plan are important, but full success depends upon extra effort by the dealer, who will profit most.

Throughout Sales Promotion Week the dealer can—

1—*Clean up and paint up.* If the accessory salesroom or the corner of the office or garage devoted to it is not attractive to the motoring public there is a strong item of sales resistance. At little expense, either in time or money, the dealer can make the background for his accessory stock, on shelves, in showcases and windows, a *selling background*. People won't buy goods out of a rubbish heap or anything that even remotely resembles one.

2—*Dress up the windows.* You've heard a whole town talk

about a certain window display in a certain department store, and if you could talk with the head of the store you would get the real story of the display—what it yielded in sales, often a surprising total, not only in the lines shown, but in other lines. Dealers and garagemen can hardly be expected to set up thousand-dollar windows, but by attractive, non-crowded arrangement of seasonable goods, possibly with a background of suitable colored cloth or crepe paper tastefully arranged, they can attract attention to their ability to meet the acces-

Dress Up

For Sales Promotion Week

You will find some "dress up" suggestions on the next two pages.

sory needs of the motoring public, and they can present before the gaze of passers-by useful articles of equipment which these people otherwise would never think of and so never buy. Dealers who have no experience in window trimming can get help from a jobber salesman or a local trimmer in another line of business or perhaps from their wives or daughters. Let's dress up, the week of August 6-13, and see what will happen.

3—*Show to every motorist entering the dealer establishment a certain popular article or group of articles.* Demonstrate the uses of the article. Arrange things so that everybody entering the salesroom or shop—accessory customer, repairshop customer, storage customer, gas and oil customer—sees

and hears about this accessory which he ought to have on his car. Try the demonstration idea on *every* motorist who can be reached all the week, not one to-day and two to-morrow, and see what happens.

4—*Put on a 'phone campaign to push a certain article or group of articles.* Select something that is easy to talk about over the 'phone—an automatic windshield cleaner, for instance. Call up every customer and every prospect who owns a car and tell him about this accessory and its utility. Ask him to drive in and see it. If he won't do that, offer to drive out to his place and put it on his car for a trial. If the dealer runs a storage garage or repairshop he can take the names of customers for the past year off his books and try to sell *every* one of them by 'phone.

5—*Offer employees in all departments of the business coming in contact with car owners a commission at least of 5 per cent, even of 10 per cent, to arouse interest on accessory sales.* A dealer intending to introduce the commission plan on accessories might even offer a larger per cent for this one week, just to show his workers the opportunities for earnings in pushing accessories.

THE Automotive Equipment Association suggested Sales Promotion Week as a sort of alarm clock to induce early rising by the workers in the sales promotion campaign—and that means everybody in the industry—manufacturers, their sales representatives, jobbers, their salesmen, dealers and garagemen and their employees. The idea is there. What will the trade do with it?

Let Display Help You Sell Accessories



Study this and the opposite pages and the story on pages 8 and 9.

WHAT THESE PICTURES MEAN

Left—This is one of the **BEST SELLERS**, a showcase and glass-lined shelves in the run-way leading to the repair department or storage space, whichever the case may be, or in a corridor which the car owner **MUST** traverse after leaving his car or while going to get it. Everything is under glass to preserve cleanliness and there is an orderly and attractive arrangement of goods not in cartons but exposed to view as they will look when in use. An attendant at such a store can do a profitable business.

Below—Everybody reads accessory ads in the newspapers and the consumer magazines. Naturally they form some sort of impression from the advertising. Why not paste some attractive ads on cardboard, set them up in your window with the advertised articles in front of them and tell the world you **SELL ADVERTISED ACCESSORIES**?

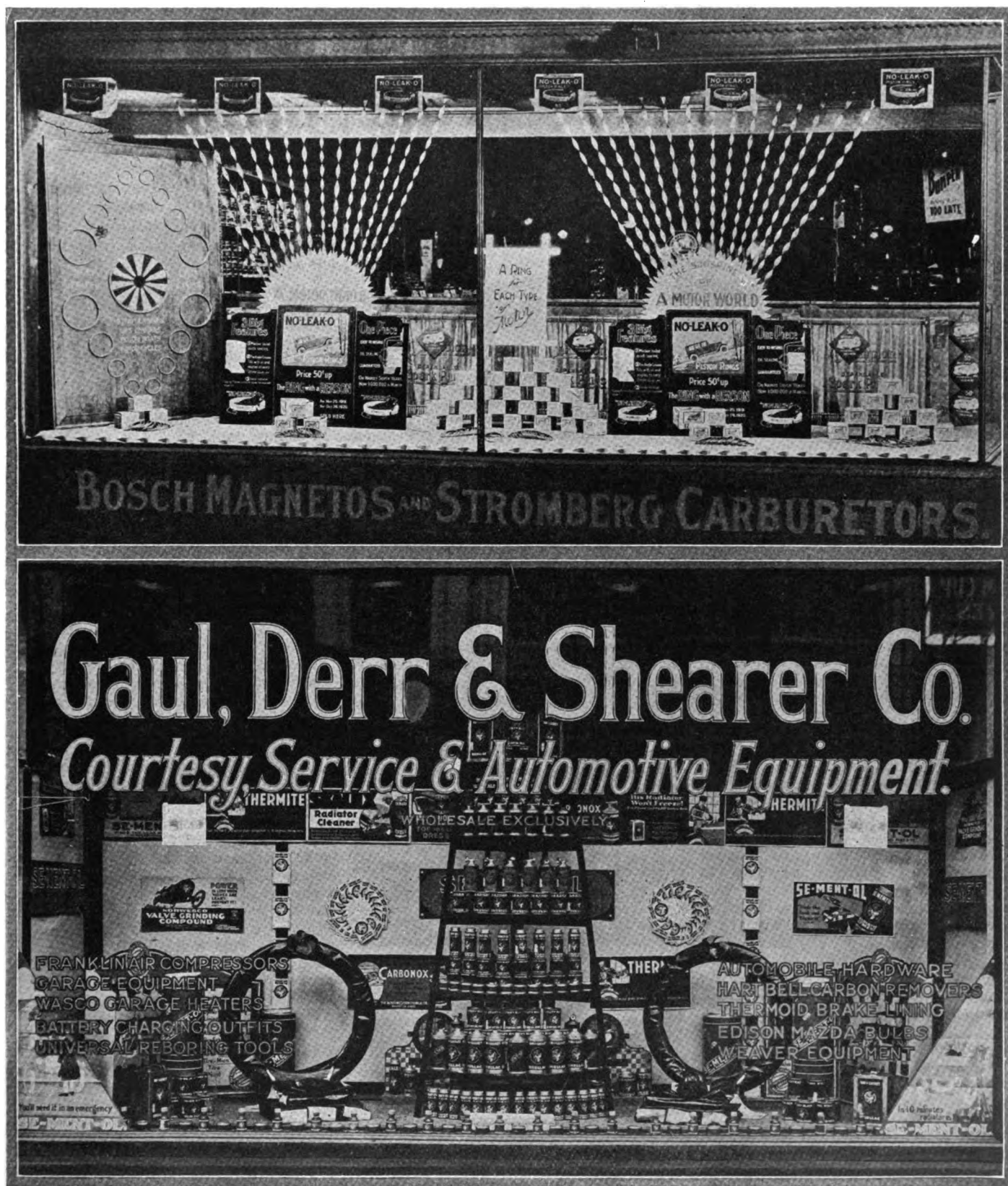


And Here Are Suggestions How to Do It

Both these windows, as it happens, emphasize the idea of specialty display, taking one product or line of products one week and another a second week

and pushing them with advertising, display and selling effort. Both also have the qualities of orderly, balanced, commanding display. The upper window

was dressed by the Kansas City Auto Supply Co. and the lower by the Philadelphia jobber whose name is on the glass.



This Dealer Put

USED CAR SELLING ON A NEW CAR BASIS

The Story of a Sales Promotion Campaign That Won Public Confidence and Quick Sales for a Philadelphia Concern

NOT just used cars with a little service work done on them; but rebuilt and refinished cars are the facts and phrasing in an advertising and sales campaign for the last four months which has drawn so many customers to buy these vehicles from the Oakland Motor Car Co., Philadelphia, that it has been necessary for that concern to lease an extra three-story building for a salesroom and service station exclusively for this part of the business.

AN added inducement to the sale of these cars taken in exchange, or "trade-in" deals, the only way in which the company will accept a used car, was the announcement, carefully lived up to, that the policy of thirty days free service and ninety days guarantee, exactly the same as in the case of new Oaklands, had been adopted.

R. F. Clayton, manager of the retail department of the company, says that the policy has been paying well, and is actually an asset.

Not only is the policy of service and guarantee in the case of rebuilt and refinished cars the same as that for new automobiles, but the method followed in selling them is essentially the same. It was found that the salesmen, having the same confidence in the rebuilt cars, with the same policy behind them, were as enthusiastic in finding prospects and turning them into customers as they had been in selling new cars. This would not have been possible for them, drilled as they had been, with used cars of any other make.

Through the "reduction sale," which proved most gratifying, a schedule was arranged whereby four salesmen were on the floor each day during the forenoon, the noon hour being the signal for a shift to a different set of four men. At each shift the names of the salesmen were made to appear prominently in large white letters in a display rack placed on a table. This served as an aid to both the public and the salesmen, for very obvious reasons. The salesroom was kept open till 9:30 in the evening all through the big sale and the schedule was an alternating one, so that the same salesmen were not on the "late trick" two successive weeks and there was therefore no dissatisfaction. Each salesman who had been on the floor in the morning was afforded an opportunity to

follow up his regular prospects and customers in the afternoon.

The general plan, outside of special sales, is to have, on an average, two new car salesmen and one used car salesman in the new car salesroom in the forenoon and a similar apportionment in the afternoon; but there will always be at least two used car salesmen on the floor of the used car salesroom to see the "step-ins." The object of having at least one used car salesman on the floor in the new car salesroom is, of course, to enable this man, particularly well primed on offerings in the used car line, to "steer" prospects calling there for used cars to his colleagues in the used car building.

It is planned to divide the present force of nineteen salesmen, with several additions, in such a way that some will be entirely new car salesmen; others will be entirely used car salesmen and certain of the number will devote most

An extra service station for used cars of any kind is a novelty in Philadelphia where a dealer has not designedly started out to secure an extensive second-hand car trade. But in this case the company literally was forced into taking the step through the results, in sales, of its advertising, a "special reduction sale" of two weeks' duration, adding impetus to the June merchandising. The general campaign will be continued for the rest of the year.

of their time to street work. Under the proposed plan at least fifteen men will be employed in selling new cars and six in selling used cars. The new car sales and service building is at 918 North Broad Street and the used car sales and service building, just leased, is at 1515-1517 Thompson Street, not far away. Minor adjustments are made on new cars in the rear of the new car building, where three streets meet and "shop" jobs for that department are attended to on the second floor.

As many as forty-one jobs in a single day have been serviced in the new car building, with seven cars waiting their turn for shop jobs in line outside the rear doors. Thus it may be seen that a used car service station became imperative. On the rebuilt and refinished proposition, in the case of eighteen cars out thirty days, only nine came back for service of any kind.

Sales of used cars, since the start of the campaign, have been averaging from thirty-five to forty a month; but the two weeks' "price-slashing reduction sale" increased this average for the time being. Since the inception of the advertising campaign four months ago, according to the retail sales department figures, used car sales, or specifically sales of rebuilt and refinished cars, have been somewhere between 60 and 75 per cent of the entire business.

The salesmen, of course, were carefully instructed on what constitutes a rebuilt and refinished car, so that they could reassure prospects and customers. In addition, W. W. Hopkins, the company's appraiser, who handles used car sales in the used car building, invited those who called there to take a trip through the plant and see for themselves the different successive mechanical operations through which a used Oakland car goes before it is placed on sale as re-

High Lights of the Campaign

1. Liberal advertising space taken in foreign language as well as English newspapers.
2. Every rebuilt car sold backed by policy of thirty days' free service and ninety days' guarantee, the same as for a new car.
3. Sales force "pepped up" by thorough instructions as to what constitutes a rebuilt, refinished and guaranteed car, so they might have strong talking points.
4. Special "reduction sale" held, giving impetus to general campaign.
5. Some cars, as a result, sold within thirty minutes of being placed on the floor. Mechanics could not rebuild as fast as demand.

built, refinished and guaranteed. These processes include the following:

1. *Tearing down the motor and painstakingly rebuilding it, putting in new piston and piston rings if necessary.*
2. *Testing the motor thoroughly.*
3. *Cleaning all parts.*
4. *Tightening the chassis and replacing any worn parts.*
5. *Giving the car the same road test as for a new machine.*
6. *Sending the car, if necessary, to the upholstery department to be renewed and repaired.*
7. *Repainting by experts who apply from six to eight coats, from filler to finish varnish.*

A satisfactory though different type of repairing is done on used cars that are old models and cannot be guaranteed. They are put in the best possible order considering the material to work on and are sold as "reconditioned" cars.

The line of argument in general, adopted by the rebuilt and refinished car salesman, in conversation with the prospect is, in outline, about as follows:

While it costs no more to operate than a new car, its original cost to this purchaser is considerably lower. It looks and runs as well as a new car and its depreciation is less than any ordinary second-hand car. The service on it is free for thirty days, as in the case of a new car and it is, in like manner, guaranteed for ninety days.

That sales have been so satisfactory is attributed not only to the advertising campaign, but also to the fact that the salesmen have been "up on their toes and going" all through. It is on record that for three weeks, owing to the fact that they were selling faster than the mechanics could rebuild and refinish them, the company had not a single Oakland of this description ready for the floor.

"I could easily sell 200 rebuilt Oaklands a week, if I had them," asserted Clayton. "I have not been counting promises as sales, but deliveries only."

Sometimes it was possible for the company to be so certain as to advertise it, that a particular rebuilt and refinished car would be sold within thirty minutes after having been placed on sale. Usually it was sold before the time limit.

The prices of the company's used cars generally were lowered in May. This included cars of other makes, taken in exchange.

The advertising placed during the campaign has not been uniform, but it has been particularly attractive, and a point which other concerns might do well to note is that considerable space has been taken in the foreign language newspapers, especially for the benefit of those of foreign birth or extraction who are among the most likely to use motor cars. This step has proved very much worth while.

Taken altogether, an average of 1369 lines of advertising have been used for some weeks, including insertion in four Sunday papers. Display has varied from sixty lines, single column, to two full columns and 150 lines across three columns. For one seven-week period there was an average of 1,437 lines.

As indicating something of the pro-

portion of sales, two other kinds of cars are serviced to every eight Oaklands. The equipment in the used car service station, consisting of \$12,000 worth of up-to-date machinery, is as good as that in the new car service station.

For instance, there are large and small drill presses; a 22-inch lathe; an 18-inch arbor press; a forge and anvil for blacksmithing; a 15-ton press; a shaper;

cars will be stored here. The used car salesroom occupies the first floor. Altogether there are 15,000 square feet of floor space in the used car building.

High Lights of the Campaign

1. Liberal advertising space taken in foreign language as well as English newspapers.

2. Every rebuilt car sold backed by

How the Campaign Was Advertised



These are samples of the ads used by the Oakland Motor Car Co., Philadelphia, in a used car campaign that compelled this dealer to lease an extra salesroom and service station to meet the demand created. The ad at the left sold the car in less than 30 minutes from the moment it appeared on the salesroom floor

a double chain hoist; a motor stand; a power saw; an emery grinding wheel; portable work benches, rolling on casters, to be moved from job to job to save time and energy for the operator and work benches with complete layout of small tools. This machinery, some of it electrically operated, is divided between the second and third floors, the second floor being the repairshop proper. The stockroom, partitioned off with stout wire mesh, also is on this floor. The third floor is more especially for refishing, including a paint shop and some

policy of thirty days' free service and ninety days' guarantee, the same as for a new car.

3. Sales force "pepped up" by thorough instruction as to what constitutes a rebuilt, refinished and guaranteed car, so they might have strong talking points.

4. Special "reduction sale" held, giving impetus to general campaign.

5. Some cars, as a result, sold within thirty minutes of being placed on the floor. Mechanics could not rebuild as fast as demand.

A Fuel Economy Contest for Owners

HAVE you thought of an owners fuel economy contest as a means of enlisting the interest and enthusiasm of your customers in the car you sell? Overland, in Indianapolis, did it recently with fine results. Under the terms of such a contest the owner brings the car to his service station, where all gasoline is drained and a special container fixed to a stanchion of the windshield. An observer then gets in the car with the owner and it is driven over a loop, which takes it through various traffic conditions. All carburetor adjustments and

any tuning of the car is done by the owner.

Such a contest should be preceded by a short aggressive advertising campaign and results from day to day announced to the public, either through the advertising columns of the local papers or in the news columns if such space can be secured. In Indianapolis 66 Overland owners entered such a contest and rivalry and enthusiasm generated produced much valuable advertising for the car.

Maybe a contest would help you.

Shall We Have a National Enclosed Car Week This Fall?

**Yes, Is the Answer of the Brooklyn Dealers, Who Staged a
Successful Local Week Last Year and Favor Another**

By RALPH EBBERT

Executive Secretary, Brooklyn Automobile Dealers Association

A NATIONAL Enclosed Car Week?

Brooklyn's answer is an emphatic "Yes," and Brooklyn has facts and figures based on experience to back up the statement that a week of adequate publicity and intensive featuring of enclosed models will produce satisfactory results in immediate prospects and actual sales.

Brooklyn passenger car dealers last fall were puzzled by conditions and some were discouraged over the sales stagnation that had developed almost over night. All agreed that something should be done to boost sales, but how? It was first suggested that the annual Brooklyn show be held in October or November, but the big armory in which these exhibitions have been held for ten years was not available during these months. As a substitute it was decided to hold an exhibition of enclosed models in salesrooms of members of the Brooklyn Motor Vehicle Dealers Association, Inc., with the hope that business could be stimulated by an intensive co-operative selling campaign with the introduction of features novel enough to attract the attention of the buying public.

The week of October 11-16 was determined upon and publicity was obtained by—

1. *Advertising in newspapers, posters, cards on trolley cars and in subway and elevated stations.*

2. *Attractively decorated showrooms, varying greatly in design, but all displaying autumn leaves and fall flowers.*

3. *Announcement of free transportation between members' salesrooms at any hour during the week of the show.*

The entire membership did not exhibit. The truck division was not interested and some passenger car men had no enclosed models to show. Twenty-six dealers agreed to share the expense of staging Brooklyn's first demonstration of the kind. Each contributed \$50 and this fund was doubled by an appropriation from the association treasury. The only additional expense to members was for decorations and for window cards which were painted in attractive colors and tastefully framed.

It is difficult to state results in actual cash. Those who benefited most were those who followed up the general publicity with a personal campaign in newspapers and by mail. *Approximately 100 passenger cars were sold during the week by members, 60 per cent of which were enclosed cars.* Of the 26 exhibiting members, 22 reported trade stimulation, some selling more in one day than in the entire previous month. Ten reported three times as much business as the average for many previous weeks, and only four said they had not been benefited.

The significant part of the exhibition, however, was that without exception the entire membership went on record that the general results had proved that the idea of an enclosed car week was sound and that it was worth while making it an annual feature of the selling year in Brooklyn.

The association had been reorganized only a few months before and this exhibition did more to prove the value of co-operation than numerous meetings and addresses by men prominent in the trade. For \$50 each member benefited by a \$2,600 advertising campaign with the name of his

product and his place of business incorporated in each piece of copy.

A spirit of fraternity and mutual helpfulness made its appearance. Salesmen were cautioned to be particularly careful in sales talks and to avoid anything that might border on criticism of a competitor's product. In addition price classification cards were printed listing cars under \$1,000, from \$1,000 to \$2,000, from \$2,000 to \$3,000, etc., delivered. The association believed that one of the most effective sales arguments would be for a dealer to show such confidence in his own line that he could without hesitation suggest comparison with any other car in his price class. And this argument was proven sound.

The presentation of this classification card to unconvinced prospects was followed by an offer to drive the prospect to any other salesroom to expedite comparison. When the idea was first adopted some dealers believed that this transportation feature would overtax their facilities, but this was not the case because most of the prospects drove up to the salesrooms in their own cars.

In all advertising during part of the preliminary campaign and during the entire week, this slogan appeared:

"Our members are pledged to the highest standards of business practice. The association name on each show window means 'the dealer measures up.'"

Brooklyn's Enclosed Car Week did not accomplish any miracles, but it put some pep in motor car selling at a time when it was greatly needed; it brought dealers together in a spirit of friendly competition and demonstrated in actual dollars and cents the value of trade co-operation.

Merchants and Store Keepers

*Most Accessory Dealers Are in One Class or the Other—
It's the Jobber's Job to Help Make 'Em ALL Merchants*

IF all "store keepers" were merchants what a happy world this would be for the jobber and his salesman—and what a prosperous collection of automotive equipment dealers there would be.

One of the things that has been wrong with the business of selling automotive equipment is the large percentage of just plain store keepers in the ranks of the accessory dealers.

A LETTER of the G. Norman Baughman Co., Tampa, Fla., to its salesmen and department heads, signed by E. V. Plane, sales manager, is worth reading NOW by every jobber, dealer and salesman handling automotive equipment. It gets down to fundamentals and it presents an idea that should be worth much in the development of the merchandising of accessories.

This letter emphasizes the importance of making merchants—men who create demand and supply it—out of store keepers—men who only supply demand.

Let's read it:

"In the old days men engaged in what is commonly known as—'keeping store.' They bought a stock of goods, put it on the shelves, then sat down and waited for some one to come in and buy. When some one, out of pressing necessity, *did* come in, the idea was to take the article off the shelf, hand it to the patron, receive the money, put it in the drawer and go and sit down again. It was extremely easy, quite dignified and fairly remunerative occupation as occupation ease, dignity and remuneration went in those days—this 'keeping store.'

"But, as time went on there were those in this class of 'store keepers' who began to get a little dissatisfied with the remuneration part of it—and who were not so particular about the dignity part of it, and willing to leave the ease to others. The customers did not come in fast enough to suit them, nor buy enough when they did come in—and they got tired 'sitting.' They had to have more 'demand' and they made up their minds to get it—by creating it.

"This class of 'store keepers' became known as 'merchants' because they were engaged in what is now termed merchandising, the definition of which is 'Creating and Supplying Demand.' The difference between the 'store keeper' and the 'merchant'

is that the former merely supplies demand—the latter *creates* and supplies it—all the difference in the world. The 'store keeper' should naturally belong to the same club as the 'order taker' among salesmen, because he is performing the same function, and as a matter of fact you do find him pretty closely associated in business these days.

"Our suggestion, which on account of space must be general and brief, is just this. Take a sheet of paper and list the names of all your customers in two columns, one headed 'store keeper' and the other headed 'merchant'—then make it your specific job to see just how fast you can truly and consistently transfer names from the former to the latter column. It's a great big job if you lay it out right. It is the biggest, most constructive and most remunerative work you or

any salesman can do, because it's the greatest commercial service that can be rendered—a thousand pages couldn't tell you just how to do it, but your own judgment and careful analysis of your customers can accomplish this important aim.

"Don't keep a customer out of the 'store keeper' class just because you don't find him sitting around on the store boxes—he may be doing something else, but you will find many of them just as blind to the advantages of systematically *creating* demand as those holding down the boxes or looking for a place in the shade.

"If you will make up the list of 'store keepers' and 'merchants' in duplicate, sending copy to this office, we will be glad to co-operate with you in this work by writing letters and sending literature to your list of 'store keepers.'"

3 Things A Store Keeper Would Not Do, But a Merchant Might

IN almost any locality there are a number of perfectly good cars which are seldom used by their owners because of lack of time in which to drive the cars, inability to drive the cars easily or absence of the member of the family who is accustomed to drive. Also in many cases these unused cars need new parts, new tires and new accessories. This being the case, why couldn't the dealers of a city get together and stage an "Everybody Use Their Car Week" in which all folks would be urged to get their cars out and participate in parades, short tours and "Give a Joy Ride to a Friend" stunts? Surely such an affair would bring out many cars, and if the dealers offered free inspections of cars during the week and free advice as to repairs, accessories, and so on needed by cars, a lot of business in tires, repairs and accessories could be developed.—A Dealer.

THE St. Paul Tire & Supply Co., Columbus, finds it profitable to send a man to the business section regularly to copy license numbers of cars with tires that need attention. Through the num-

bers the owners are traced on the registration list and personal letters are written advising them of the tire conditions and suggesting a visit to the store for advice concerning repairs or the purchase of the rubber. From the volume of business secured through this method, and the responses both by mail and by personal visits really indicated that the service is appreciated.

AN up-to-date garage manager of Columbus, Ohio, realizing that many patrons drive out of the garage in the evening without turning on their dimmers or headlights, has a sign posted just over the front door with the following: "Please turn on your lights." This sign is in large letters and can hardly be missed by the driver. The sign is the means of many drivers turning on their lights and thus preventing being stopped by a policeman with the chance of being summoned to appear in police court the next morning. Many favorable comments are heard of the thoughtfulness of the garage man in question.

Hey, Mr. Dealer—

STOP THIEF!

Every Stolen Car Is a Sales Resistance Factor—Are You Helping to Curb the Crime?



CAR dealers throughout the country are coming to the realization of the fact that the wholesale stealing of automobiles is getting to a point where it threatens to become a definite factor of sales resistance. Already the prevalence of thievery in certain districts has resulted in the imposition of heavy penalties in the issuance of automobile insurance. This together with the fear of loss of cars is becoming a factor of sales resistance that must be faced squarely by garagemen and dealers.

At the present time penalties are imposed by the insurance companies in the selling districts surrounding nine cities and one entire State. The cities are New York, Philadelphia, Albany, Troy, Cleveland, Detroit, Chicago, Kansas City and St. Paul. The penalty also applies in the entire State of Oklahoma. In the city of New York it amounts to an additional premium of \$25 on theft insurance; on theft of the smaller types of automobiles which have been the particular prey of the thief. In the other cities the penalty has been \$15. In all cases they have been made contingent upon the non-equipment of the cars with some approved locking device. Various plans for co-operative effort to curb car thievery have

been used, but up to the present none has proved very effective. Only recently Pennsylvania enacted a law making the books of garagemen available to police authorities for the purpose of checking them for license numbers and other data in locating stolen cars, but even this drastic action has not produced any material effect in lessening of the number of thefts reported.

The readiness with which most car numbers may be effaced has made the operation of such a plan difficult and at the present time the National Automobile Underwriters Conference is taking up with the car makers the question of having a number placed on the engine of automobiles in such a manner that it

cannot be filed off in a few moments.

According to R. P. Young, secretary and general manager of the National Automobile Underwriters Conference, one of the most serious obstacles in the fight against car thievery is the failure of courts to inflict heavy sentences for the crime. One of the most effective plans for reducing the number of car thefts was adopted in Boston some time ago; this consisted of securing the co-operation of the daily newspapers in printing in tabular form the car thefts reported each day and the arrests and convictions of thieves and particularly the penalties imposed by the municipal and State court judges. A similar action was taken in Providence and other New England cities with good results.

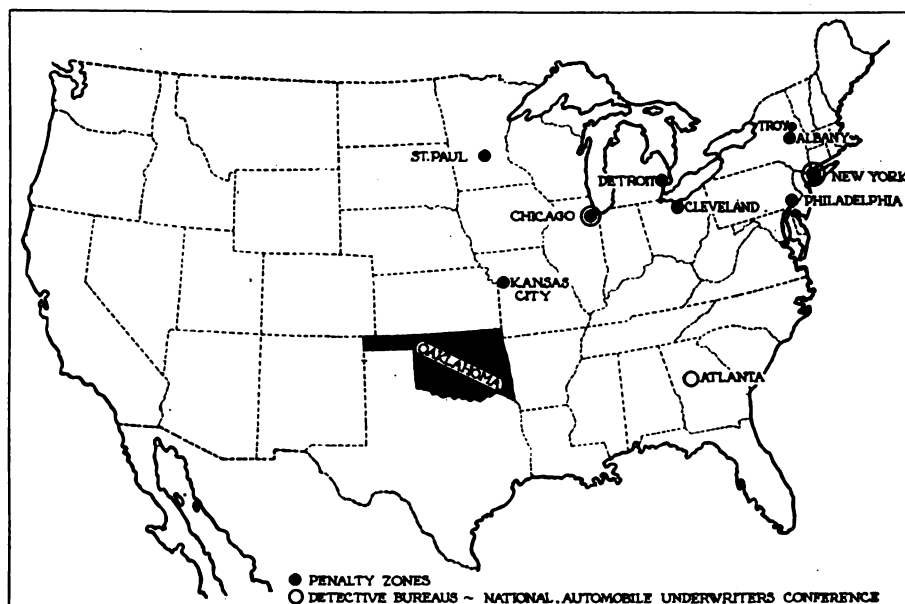
In spite of the difficulties that have been met by the authorities in curbing automobile thievery there is much that the dealer and garageman can do individually and collectively to better conditions. Among these are:

1. A thorough investigation of ownership of all cars offered for sale or brought in for repairs where the slightest suspicion concerning the ownership of the car is aroused.

2. Keeping of records of car and unit numbers on jobs in the establishment of dealers and garagemen for use in co-

(Cont. on page 38)

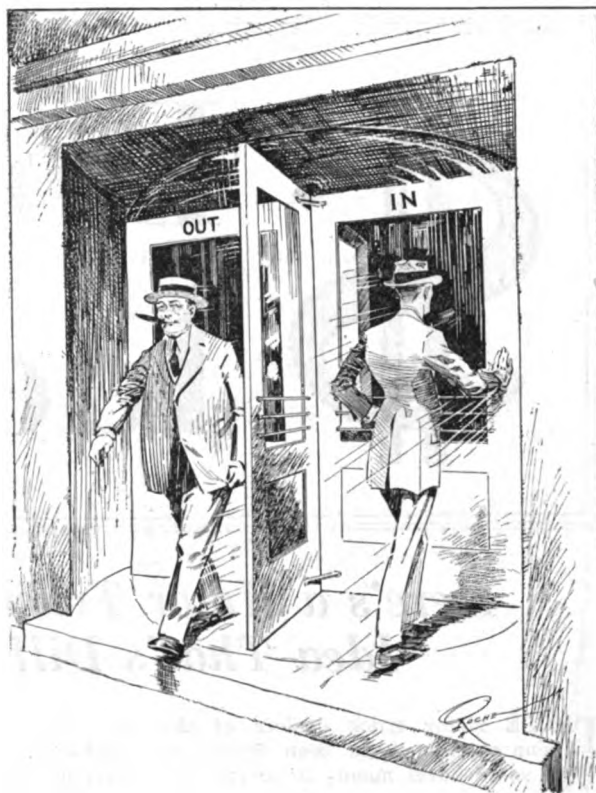
Are You Near One of These Cities?



Prevalence of car thievery is responsible for the imposing of special theft insurance penalties in the cities shown with black dots on the above map. Are you helping to curb the crime?

Reilly Goes Out to the Gear Works

By RAY W. SHERMAN



"HOW come? How come? What's all the shootin' for?" demanded Henry Bennett, the Redman dealer in Callawassa, as he entered the offices of C. J. Reilly, Inc., and found Reilly, the Sennett dealer, busily engaged in cleaning out his desk. Most of the accumulation he threw on the floor. Some of it he stuffed into his bag.

"Just cleaning out, that's all—moving," said Reilly.

"Moving?" puzzled Henry. "Moving? Where from? Where to? What for? When? Why? Come—say something."

"Well," expostulated Reilly, "keep still a minute and I will. If you'd ask fewer questions and listen more you'd hear more and wouldn't need to ask so many questions."

"Well?" said Henry. "Well?"

"I'm moving myself out to the gear works," Reilly replied.

"Gear works!" Henry almost shrieked. "Gear works! Crazy—or what!"

"No, not at all," Reilly smiled. "I've always had an interest in the gear works, as you know, and recently I got a chance to get a still larger interest. On top of that, the gear works needs some additional assistance right now, so I'm going to move out there and help run the plant."

"Well, what do you know about that?"

"What of it? Isn't that all right?" Reilly inquired.

"Well—I—I suppose it is," said Henry, "but—but—it's so unexpected. Why didn't you say something about it?"

"I didn't know about it until yesterday."

"And you're moving to-day?"

"Why not? What's the difference when I move, so long as I'm going to move?"

"Well—" Henry hesitated, "well—now that I think of it I don't know that it does make any difference when you move—that is, provided you're really going to move."

"Then I'll move this morning if it's all the same to you," said Reilly, and he shied a wire paper clip at Henry, with whom he had fought and argued since their early sandlot days.

"But—but—what'll become of this business?" Henry excitedly asked.

"Who'll run it? Won't it go to pieces? You have a big investment here."

"Huh," snorted Reilly, "that's all you know about this business. It will run the same as it has for the last couple of years. This is a REAL business, not a fly-by-night affair. It's an institution."

"I know it's an institution, but—"

"But what?"

"But, who'll run it?"

"Who?" Really exclaimed. "Why, Tommy Trumbull of course. He's run it for two or three years and I don't see why he can't keep right on running it."

"But you've helped him run it, haven't you?"

"Not very much." Reilly scanned a paper, then threw it away. "Not very much—and not at all lately. What do you suppose I've had a manager for?"

"Well—"

"Well nothing," Reilly interrupted. "I set out to make Tommy Trumbull manager of this business—provided he could handle the job. And it didn't take very long for him to demonstrate that he could handle all the job anybody could hand him. He hadn't been here two weeks when I went on a vacation and let him wiggle—and his movement was perfect. Since then I've left him almost entirely alone. He used to come to me for advice several times a day, and then less frequently, and then hardly at all, and he hasn't asked me anything of importance in weeks. I'm getting so I feel non-essential—whatever that is. Any way, I'm moving out to the gear works this morning."

"What do you know about that?" mused Henry, who had now recovered sufficiently to borrow a cigarette and a match from Reilly and ease himself into a chair, where he worked up a fine smoke screen. "Humph!" he puffed. "Well!"

"Probably it sounds funny to you for me to say my going out to the gear works won't make any difference with C. J. Reilly, Incorporated," Reilly continued, "but it just bears out the things

I've been trying to drill into your noodle for years. I've told you that you ought to get some department heads and find some one who could act as manager for you—some one who could be even better at managing than you are. That would leave you free to promote the larger things in your business and would permit you to monkey with additional interests in case opportunities appeared.

"I've been preaching that at you for years, but I don't think it registered one hundred per cent. Meantime, I've been letting Tommy Trumbull walk off with the whole works in C. J. Reilly, Incorporated. I've let him edge himself into the whole thing and he's been running it all by himself for months. Lots of people still think I'm manager—but I'm not—and I haven't been for ever so long. Tommy's done it all—and now he will simply keep on operating 'as was.'"

"And it won't make a particle of difference with the business, because this business is organized—it's an institution—and the public, while it may think it deals with men, is really dealing with institutions, and as long as the institution continues to give them their accustomed service they don't give a hoot who runs the machinery. I would simply be kidding myself if I thought my going out to the gear works would make much difference. On top of that, I haven't died yet and there aren't a million miles between here and the gear works."

"So, Henry, you see, it's going to work out well all around—I hope." Reilly emptied the last drawer and snapped his bag shut. "Tommy's a real manager of a real business, and—" Reilly yanked the bag open again. "Gee, I almost forgot it! That would have been fatal."

He put in a burned, blackened, odoriferous but lovely and beloved corn-cob.



Dollar Ideas

Earn a Dollar

MOTOR WORLD will pay \$1 each for ideas for this department. The ideas should have to do with sales and business management. The idea should be in two parts:

- 1—The problem.
- 2—The solution.

But if you'll get the idea on paper in any fashion whatsoever, we shall be glad to shape it up for you. Do two things:

- 1—Help some other man.
- 2—Make a dollar for yourself.

Here's a Motor Truck Display Idea That's Different

THOSE motor truck dealers of the country who have been trying to devise some novel means to attract attention to their product might follow the example of the Mack-International Motor Truck Corp. in Los Angeles. A

decidedly unique display has been built by having a 3½-ton Mack chassis turned over on one side and mounted on a 5-ton chassis. The exhibit is so spectacular that a crowd blocks traffic almost every time it stops on the street.



Although of excellent advertising value, this display was devised primarily for educational purposes. The lower half of the crankcase, the bottom of the transmission housing, the cover plate over the timing gears and governor are removed. A pulley is attached to the auxiliary shaft of the upright chassis and connected with another pulley on the drive shaft of the turned over chassis. The motor of the truck in normal position therefore furnishes power to drive the turned over chassis so that all the units, including one rear wheel, function the same as if the chassis were operating under its own power. The upper chassis can be driven when the lower chassis is in motion, but this is not regarded as advisable, because the engine speed of the truck on the road governs the speed of the second chassis' units, and as one has to be oiled by hand there is some danger of overheating a bearing.

The high and automotive schools of Los Angeles have taken such deep interest in the display that the truck company was invited to make demonstrations to the classes. As a method for taking the truck to the prospect and showing him construction features, when the prospect is not willing to come to the truck, this display is proving an excellent sales argument also.

When the exhibit is on the highway the side curtains are drawn to keep grit off the exposed parts. The curtain space has been made available for advertising purposes.

Camp Comfort and the Automobile

THE Hudson-Ford Agency, Seattle, devoted a display to the automobile camper. Moss covered the window floor, with a late model car occupying most of the rear space. The motor car had a portable table extension attached on which rested some cans of food and cooking utensils. Near the front was a small tent, with the flaps open to reveal the furnishings. A painted drop, which enclosed the rear, depicted two men seated by a camp fire in the depths of the woods.

Excellent results are being gotten from this educational exhibit by a Los Angeles truck dealer. It consists of a 3½ ton Mack chassis turned over and mounted in a 5 ton chassis. The overturned chassis motor is driven by a belt through the floor of the truck. Side curtains are used for advertising when the truck is travelling and they protect the exposed parts of the overturned chassis from grit and dust.

An Inexpensive Advertising Activity

AN interesting and inexpensive advertising stunt was held by an Indiana automobile dealer when a big new concrete bridge in his town, in which the public was very much interested, was opened. This dealer saw to it that one of the cars he sells was the first to go over the bridge when it was officially opened. And following this event he went to the local newspaper offices and saw to it that they stated that his car was the first over, and then during the rest of the day he had his car driven around the streets of the city with a sign reading like this:

"This car was first over the State Boulevard Bridge.

"We lead, others follow.

"Ride in a leading car."

This stunt created a lot of comment and got his name and the name of his car prominently before the attention of the city's automobilists.

These Are Good Summer Paint Job Prospects

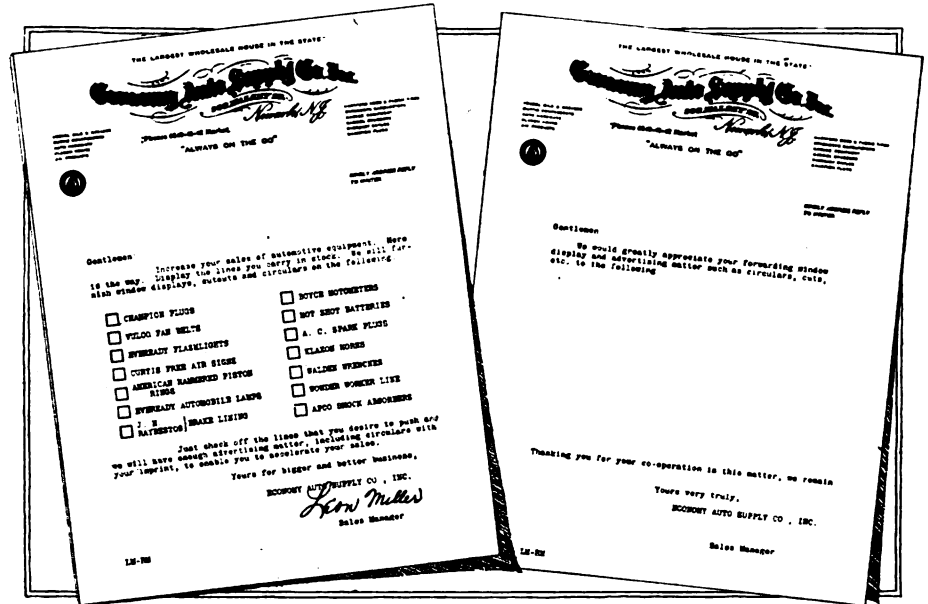
TO offset the lull that follows the spring and early summer rush in the average automobile paint shop, R. J.

Hotchkiss, manager of a Cleveland firm specializing in this work, has solicited a new field of commercial work on delivery cars and trucks. In some lines, such as ice, ice cream, distilled water, soft drink, creamery and chemical firms (getting set for their midsummer peak of trade), the unavoidable dripping and

Careful Equipment Inspection Builds Good Will

A COLUMBUS dealer has put into practice the rule that all of the equipment of a new car shall be thoroughly gone over before the delivery of the car is made. This concern had con-

How a Jobber Helps Dealers Display Goods



Although many manufacturers of nationally distributed automotive equipment items provide lines of very effective window display, send out circulars, etc., it has been one of the problems of the jobber to get this material into the hands of the dealer and to actual use in the dealer's store as a means of stimulating sales. The Economy Auto Supply Co., Inc., of Newark, N. J., has found the letter shown in the accompanying illustration an effective means of interesting dealers in these merchandising helps. With a letter so arranged it is only necessary for the dealers to check off the items they desire to push and return it to the jobber who supplies them with cut-outs, pamphlets, merchandising stands and any of the sales helps supplied by the makers

A Postcard That Helped Sales

When Shall We Deliver Your New Ford?

Phone Astoria 2710

.....Salesman.

HOME OF THE Ford	8 MINUTES FROM BROADWAY
----------------------------	-------------------------------

HELLMAN MOTOR CORPORATION
AT QUEENSBORO BRIDGE—PLAZA STATION
Long Island City—Greater New York.

"BEFORE THE WAR" PRICES

OUR THRIFT PLAN	CASH PLAN
\$188 Down \$37.54 Monthly	T Chassis \$480.18
\$199 " \$39.82 "	Runabout \$524.18
\$216 " \$42.95 "	Touring \$571.03
\$237 " \$47.38 "	Coupe \$743.66
\$313 " \$62.75 "	Sedan \$831.36
\$207 " \$41.38 "	Ton Truck \$546.55

Cars all have Self-Starter, Electric Lights, Dismountable Wheels, Tire Carrier and Extra Rim

DELIVERY AT YOUR DOOR, WITH NO FURTHER CHARGE FOR FREIGHT, WAR TAX, GAS OR OIL

Driving Lessons on Our Own Grounds Are Free
Also 4 Lectures Each Month on the Care of Your Car
PLUS 100% REAL FORD SERVICE

This card, which is postcard size, is sent out in envelopes with a one-cent stamp to names selected from telephone directories, social registers, etc. The salesman's name is put on with a rubber stamp and the cards are divided up among the salesmen. The feature of this card is that the exact prices, including war tax and freight, are given. On the reverse side is a picture of the building. Three days after mailing 8000 of these cards four sales and nearly fifty direct inquiries for salesmen to call were traced directly to the cards

fumes have a bad effect on all ordinary chassis and body paint and varnish. Hotchkiss personally and by form letters solicited and secured a good number of jobs on trucks operated in these lines, using a guaranteed rust-proof paint of unusual durability. Another point he played up was the advertising value of high-grade new lettering for old trucks, and a good many firms were sold on this, despite their rigid economy policies.

Garage Man Gives Summer Night Service

WITH the advent of summer and hot weather, which is causing motorists to drive quite late in the evening, often to the small hours of the morning, a Columbus garage proprietor has devised a plan of keeping his garage open to accommodate the late comers. While this entails an extra expense, still the proprietor has made extra customers, and he finds that it is a good business policy. Service is now what the public requires and the average owner is willing to pay for it if he receives it in the proper way. The new hours are advertised by signs, and the owner, is not constrained to return at a certain hour.

siderable trouble in having customers report some part of the equipment missing. As an example, the curtains of a car are often not fitted and in some instances must be supplied with snaps and receptacles to be fastened into place. When a new customer gets out in the first rain storm and his curtains do not function there is a good deal of ill feeling and this is what the dealer in question tried to avoid. The plan has worked wonders during the three months that it has been in operation and complaints are far less numerous. Curtains are thoroughly examined and fitted into place before actual delivery of the car is made.

Helping the Newspapers Help You

WHY not get local newspapers to run automobile columns in which appear gossip about dealers, employees and motorists? And then furnish them regularly with interesting "dope" for these columns. It is an easy matter to get business-building publicity of this sort in the local papers provided the dealer goes after it hard and right. Pay as much attention to getting free publicity of this sort into the newspapers as you do to getting the right sort of copy for the ads you pay for.

Editorial Observation

Sales Helps

IN the code of fair trade practices adopted by the Automotive Equipment Association is this paragraph:

We feel it an injustice for a jobber to accept display fixtures from the manufacturers without keeping them in the use for which they were intended, and strongly disapprove of any other course or use being made of same.

The recommendation is good and it opens a field of discussion. Are manufacturers providing enough sales helps in the way of display boards, showcases and cabinets and the like, not only for jobbers, but for dealers as well, and are jobbers and dealers making the practical use of them that would encourage more extensive efforts along this line?

You can go into many a dealer's or garageman's place of business and find a manufacturer's special show cabinet or half a dozen manufacturers' display boards gathering dust in a corner. But this does not mean that efforts to stimulate sales in this way are futile. It simply means that here and there are retailers who are overlooking sales opportunities, possibly through indifference or perhaps through the failure of a jobber or his salesman to demonstrate the value of these things in building trade.

It would seem that the trade needs, first, greater effort on the part of jobbers and their salesmen to show the uses of manufacturers' sales helps and to induce their continued use, and, second, more thorough investigation by manufacturers of the possibilities of sales promotion through various visual helps. If the trade can have more sales helps, or at least more effective helps, and can be induced to use them more fully and intelligently, here is one step toward the broader outlet for automotive equipment products and greater profits for everybody concerned, which the industry is seeking.

Fair Practices

THE Automotive Equipment Association has written another accomplishment for itself in its adoption of a code of fair trade practices. This code has thirty-one provisions affecting the relations between manufacturers and other manufacturers, manufacturers and jobbers, and jobbers and other jobbers in the automotive equipment field. It is quite a lengthy document but, boiled down, it is but a restatement of the Golden Rule. It is a code which can be enforced only by the voluntary action of members of the association subscribing to it, but nevertheless it is a step forward in business ethics.

It was not so many years ago that David Harum's definition of some people's golden rule—"Do unto others as they would do unto you, but do it first"—applied in quite a general way to a good many people in business. As time has progressed, however, the spirit of brotherly

love and consideration of the other fellow's feelings and prosperity has become more apparent. Now the greatest business men, from the standpoint of material success, are those who have and live up to an individual code of ethics of which unqualified honesty is the foundation stone.

Associations such as the Automotive Equipment Association and various organizations within the trade have many material accomplishments to their credit in the up-building of business and conservation of resources of their members. But, it is doubtful if anything is more valuable fundamentally than the spirit of co-operation, which makes such things as the A. E. A. code of fair trade practices possible.

Members of the association will find it decidedly worth while to familiarize themselves with all the provisions of the code and to see that their employees understand it as well as they do, and to try in every manner possible to live up to its regulations. Such a practice will be a decided help in giving the industry standing with the public and creating a favorable market for its products.

What Buyers Want

OF more than passing interest is the recent investigation of the National Automobile Chamber of Commerce indicating that what owners demand of their cars, above other things, is lasting qualities. A nation-wide poll of motorists showed that the emphasis on buying points, as averaged among the many who answered the questionnaire, was: Endurance, or lasting qualities, 15; economy, 14; comfort and price, 9½ each; appearance, 8; service, 7½; hill climbing, 7; flexibility, 6½; endorsement of others, 6½; specifications, 6; speed, 5½; appointments, 5.

The poll carries its lesson not only for manufacturers and designers of cars, but for dealers, particularly in the shaping of their advertising policies. The car that will retain its workability through a reasonably long period of economical operation apparently is the type of car most desired, and the dealer whose car has those qualities may well call them forcibly to public attention in his advertising and sales talks. As for the rest of the "vote," it may not be conclusive as regards the opinions of automobile owners and prospects, but at least it is fairly indicative of how a great many motorwise people feel—and their influence on other people about to buy, as well as their own notions in purchasing, should not be overlooked.

The beauty of any such movement as the Automotive Equipment Association's sales promotion campaign is just this: Any participant in the campaign, whether manufacturer, jobber or dealer, not only promotes the movement but his own interests and those of the other factors in the industry at the same time. It's a chance for real co-operation.

Pretty good weather, this hot weather, to talk to a prospect about the joys of fall motoring and the necessity of ordering early if he expects to have his new sedan when he wants it.

LETTERS *from* READERS

Local or Factory Advertising Copy *A Dealer Favors the Former, a Manufacturer the Latter in Letters to Motor World*

FOLLOWING publication a few weeks ago of an article commenting on the lack of adaptability of some factory passenger car advertising copy to local dealer purposes, *Motor World* received a number of letters on the subject, two of which have been selected for publication. A car dealer says he has found it necessary to disregard factory copy if he is to get results from advertising in his home territory. A tractor manufacturer says local dealers will not advertise consistently and in some cases their advertising lacks command unless they have factory assistance. The two letters, reproduced below, are worth reading.

What a Dealer Says

Editor *Motor World*: The writer has just read the article, "Local Interest" in the July 6 issue and wishes to state that this is just in line with my experience.

I spent many thousands of dollars running factory prepared copy in local advertising and for the past seven or eight years I have run only copy that I prepare personally.

I find that my own copy, with local color, written in strong terms without overstating facts, has been far more powerful in drawing new business and is of considerable advantage in holding old trade.

Where dealers have no one in their organization who can write attractive copy they will find most live newspapers willing and anxious to write copy free of charge; however, by studying the advertisements that most appeal to myself, I have no trouble whatever to make up new copy for every advertisement.—Southern Dealer.

What a Manufacturer Says

Editor *Motor World*: May I take issue with you slightly on the sentiments expressed in the article headed "Local Interest" on page 32 of your July 6 issue?

I quote the following from the article: "To be successful, the newspaper advertisement must be built from the ground up to specifically meet those conditions which may prevail in the territory covered by the newspapers in which it is published. . . . Surely this cannot be done by an advertising man several hundred miles outside your territory who gives no consideration to local conditions and writes the same advertisement for California as he writes for Georgia and New York."

I agree with the article to the extent that the advertising man, were he on the ground, could probably write better ads for the local conditions than he can when situated many miles away. It is quite certain, however, that the average dealer cannot write better or more effective ads than the advertising man, even though he may be many miles away, for the reason that the average dealer knows too little about what constitutes good advertising and in many cases gives too little time and thought to its preparation.

We co-operate with our dealers in advertising and we insist that he use

What Do YOU Think?

Motor World is always glad to print letters from dealers commenting on conditions in the industry.

copy prepared by our own advertising department in order to get a refund: We have had a few dealers object to this—very few. In two cases where we followed up the advertising of the dealer who objected to our copy the result was laughable. In one instance the dealer took portions of a factory ad and the newspaper ordered for him a half-tone cut of a harvesting scene in his territory. The photograph in the first place was doubtless a poor one and the half-tone too fine a screen. The result was a black smudge at the top of the ad three columns wide and five inches deep, with the reading matter set in six point.

In another case, the dealer who wanted to prepare his own advertising selected for his text some arguments from an ad we had published in a banker publication and it did not at all apply to the farmer prospect.

Still another case we recall, the dealer originated the copy himself and used no cut. He evidently did not have the faculty of expressing his thoughts in understandable English. We think probably he was thinking straight, but he did not say what he thought. If he did, then we certainly would not want to stand back of what he said in the advertisement.

The dealer who writes an advertisement is often prone to make blatant and

exaggerated remarks. He has not learned the lesson that the up-to-date advertising man has learned, namely, that you should not make a statement in an advertisement that sounds exaggerated even though it may be true, unless you can prove it on the spot.

We have found also, that unless you supply copy for the dealer, his advertising will be spasmodic, and surely hit and miss advertising does not pay. On the other hand, we had this year about 50 per cent of our dealers running systematic campaigns. Before adopting this plan, we had numerous dealers here and there running an ad now and then and during the season when they should be running continuously they dropped out entirely because the rush of business required their time.

Your article referred to automobile and truck advertising. Mine refers to tractor advertising, but I don't believe there's enough difference to mention. We take as much cognizance of the difference in localities and conditions as is possible. For example, we give the dealer a couple of dozen ads from which to select his campaign, and among those ads are copy that applies specifically to the corn country, the wheat country, the rice country, the cotton country and that is about as much localizing as is necessary.

Several months ago the writer made trips into practically every section where we have dealers for the specific purpose of gathering information which would enable him to get "local color" in his dealer advertising. I called on both dealers and farmers and questioned them extensively for the purpose above mentioned. I found that the first four things a farmer wants to know about a tractor are: How much power will it develop? What is the upkeep cost? What kind of service can I get? What will it do in the way of reducing my production costs? These questions were virtually the same from the Gulf States to Calgary, Canada, and that's when I settled the matter of "local color" in copy prepared for our dealer's local papers. The farmer doesn't want you to tell him how to farm with a tractor—he wants to know what kind of a tractor you have and he will figure out its adaptation to his local conditions. He has seen his neighbor's tractor perform, and he knows something of what he can expect of your tractor.

The dealer who will not take the factory campaign and run it will 90 per cent of the time run no advertising at all, or run copy that is little better than nothing.—A. W. Sawyer, Hart-Parr Co., Charles City, Iowa.

A Department of BETTER MECHANICS

Conducted by J. HOWARD FILE

No. 202

When asking for information, please state whether you maintain a permanent file of Motor World, as many inquiries are answered by reference to previous issues

Service Operations on the Torbensen Rear Axle

Removal of Wheels—Relining Brakes—Removal of Differential—Adjustment of Bearings and Gears—Lubrication Schedule

TORBENSEN internal gear rear axles are so designed that the differential and differential carrier may be removed from the back of the axle. Removal of the cover plate permits inspection of the differential unit without disturbing any other part of the axle.

The operations involved in the removal of the wheels are as follows:

- 1—Jack up axle.
- 2—Remove hub cap screws and cap.
- 3—Remove cotter pin in outer spindle nut.
- 4—Unscrew slotted nut.
- 5—Remove locking washer.
- 6—Unscrew adjusting nut with a spanner wrench by inserting a rod in holes on outside surface of nut.

7—Remove wheels. The bearings are a slip fit on the spindle and the outer cone only will come off the wheel. Both straight and tapered roller bearings are used.

On the $\frac{3}{4}$ -ton axle the inner bearing cone will come off with the wheel. To remove felt retainer on this axle, chisel off the three or four points where the edge of the hub has been upset over the retainer. Then pull the retainer out, which permits the removal of bearing cone and cup.

The accompanying table gives the specifications of material required for relining the brakes on the different sizes of axles.

Relining may be done in the usual manner, but care must be taken to main-

tain the band round or it will interfere seriously with subsequent adjustments when brakes are remounted. The brake bands are removed in the following manner:

External Brake

- 1—Disconnect linkage from contracting lever.
- 2—Remove cotter pin collar and spring in steady pin of anchor at rear of band.
- 3—Unscrew steady pin.
- 4—Remove nut from eye bolt which guides the tension rod and supports forward side of band.
- 5—Drive out eye bolt from brake carrier.
- 6—Remove band complete.

Internal Brake

- 1—Proceed as for external brake at rear. Lift cam faces over washer on camshaft and remove band complete.
 - 2—To remove camshafts, release clamp bolt on lever at inner end and tap it off lightly with hammer. Pull out camshaft.
- The procedure in removing the differential is as follows:

- 1—Remove wheels.
- 2—Remove bolts which hold plate inside of jackshaft pinion. This also releases flange next to brake carrier on jackshaft tube.
- 3—Pull out jackshaft.
- 4—Unscrew packing gland in jackshaft tube outer flange and side flange toward center of axle.

5—Unscrew packing gland in jackshaft tube inner flange and slide tube out from center until it clears differential carrier complete.

Operations 4 and 5 are necessary only on 2-ton models after 1919 where the differential only is to be removed and not the housing. These may be identified by the slotted locking rings on the adjusters against the side of the differential housing.

6—Remove stud nuts holding the rear half of differential housing in place.

7—Remove rear half of housing.

8—Remove differential with bearings.

To remove pinion and bearings proceed as follows:

9—Remove forward nut on pinion shaft.

10—Remove locking washer.

11—Remove adjusting nut in back of washer.

12—Pull pinion out from back of carrier.

13—Remove cap screw and lock for slotted flange on felt retainer at forward end of housing neck.

14—Unscrew felt retainer.

15—Remove cap screws and adjusting hold cover for pinion bearings.

16—Unscrew adjusting ring between bearings toward rear. This will remove rear bearing cup. (R. H. threads.)

17—Remove forward bearing cup with drift.

18—To remove differential housing, proceed as in operations 1, 2, 3, 4 and 5.

19—Remove stud nut from front side of I-beam holding differential housing in place.

20—Tap housing out with lead hammer. On recent models set screws are provided for forcing carrier housings out of I-beam.

Gear and Bearing Adjustments

Wheel bearings:

1—After wheel is in place and outer

Size of Axle	Brake	Thickness	Width	Length	Number of Pieces Per Axle
$\frac{3}{4}$ ton	External	5/32 in.	2 in.	19 in.	4
	Internal	5/32 in.	2 in.	18 in.	4
1 ton	External	5/32 in.	2½ in.	21¼ in.	4
	Internal	5/32 in.	2¼ in.	19¾ in.	4
2 ton	External	3/16 in.	2½ in.	25½ in.	4
	Internal	3/16 in.	2¼ in.	24¼ in.	4
3½ ton	Internal wheel	3/16 in.	3½ in.	55¾ in.	2
	Propeller	3/16 in.	4½ in.	31 in.	1

cone is in position on spindle, screw up inner lock nut tight against the outer bearing and revolve or rock wheel while doing so.

2—Back off nut enough to allow for a barely perceptible play in the bearings. Grip tire on front and rear and try to wobble wheel to detect any excessive looseness.

3—Replace locking washer.

4—Replace outer nut and screw up tight against the washer. Rotate wheel again to make sure that bearings have not been cramped in tightening. Outer nut wheel must turn freely.

5—Replace cotter pins.

To take up end play in pinion bearings:

1—Back off forward nut on pinion shaft enough to permit taking up on adjusting nut in back of locking washer.

2—Turn nut until there is a just perceptible end play.

3—Tighten up on forward nut and try again for end play.

4—If pinion shaft turns freely and there is still a barely noticeable play in bearings, the adjustment is correct.

5—Bend flaps on locking washer over to hold nuts.

To adjust right-hand differential bearings:

1—Remove right-hand bearing adjuster locking key and loosen stud nuts holding rear half of differential housing on right-hand side only.

2—Turn adjuster (right-hand threads) until all end play is taken up.

3—Tighten up on nuts and replace lock. Do not disturb left-hand bearing.

There is no adjustment provided for internal gear and pinion. Better results may be obtained for quietness by changing the wheels around if gears are noisy.

The following is a simple method of adjusting the differential gears:

1—Remove cover on pinion bearing housing in front of I-beam and turn adjuster one notch at a time to the left. This moves pinion toward the gear. If noise develops reverse the direction.

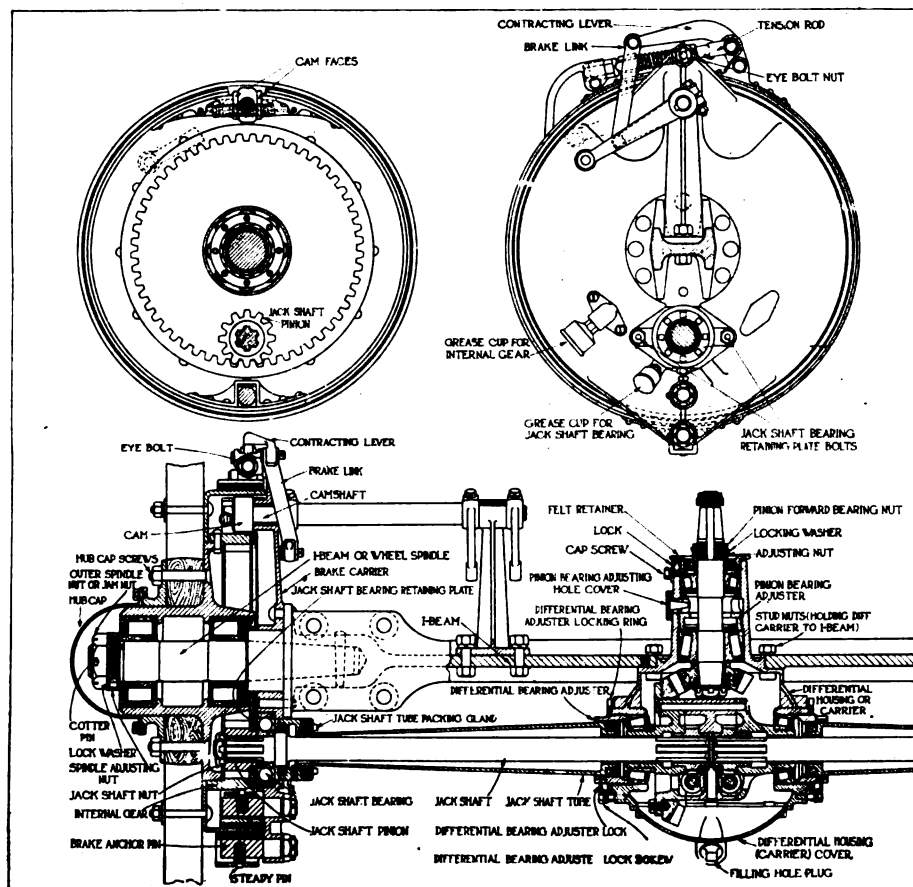
2—If no results are obtained jack up axle and remove differential housing cover.

3—Clean grease off gear teeth and apply a thin coating of red lead or Prussian blue and note the impression from pinion teeth after turning gear a few times. The impressions should be distributed over the teeth uniformly from end to end.

4—If it is necessary for lack of tooth contact or on account of back lash to move gear, take up end play in differential bearings as under heading "Differential Bearings." Move gear toward pinion by loosening the right-hand bearing a number of notches and taking up on the left-hand the same number of notches. Reverse operation if gear is to be moved away from pinion in which case loosen left-hand bearing first. Paint teeth again and turn gear until the impression shows a satisfactory tooth contact.

5—Move pinion in or out until the quietest running point is found. Bevel gears should have a back lash of approximately .005 in.

The internal gears should be given a



Sectional views of the Torbensen axle showing its construction

coating of non-fluid oil before wheel is put onto axle. Then turn the grease cups for the internal gears one turn every 200 miles. Examine gears every 2000 miles. See how much grease is left and govern future use of lubricant accordingly.

Jackshaft bearings should be packed with a soft grease or non-fluid oil and give grease cup a full turn every 500 miles thereafter.

For the differential use a lubricant which will not lose its lubricating qualities or solidify at low temperatures, nor thin out at high temperatures.

To lubricate, remove filled plug in dif-

ferential housing cover and fill until even with hole. Examine every 2000 miles and lubricate as necessary.

To lubricate wheel bearings use a soft grease or non-fluid oil. Fill hub and examine every 2000 miles, by removing hub cap. Fill as is necessary.

The brake shafts are equipped with self-lubricating bushings and need no attention except for a few drops of thin oil occasionally between the brake levers and the brackets.

Brake anchor pins and toggle joints should receive a few drops of thin oil occasionally and the internal brake cam faces whenever wheel is removed.

Book Reviews

The Modern Motor Truck. By Victor W. Pagé. Norman W. Henley Publishing Co., 2 West Forty-Fifth Street, New York City. 962 pages, 530 illustrations, cloth binding. Price \$5.

Although following closely along the lines Pagé's previous automotive manuals in the detailed description and illustration of parts and mechanisms, the present volume treats the motor truck as more than a piece of machinery and takes up from several different angles the problem of transportation in which the motor truck is only a single unit, but a very important one. The first part of the book is devoted to the theory and practice of truck construction and operation, all explanations being in non-technical language. Following this are chapters on loading and operation, special applica-

tions and body designs, electric truck construction, vehicle battery maintenance and a final chapter on truck operating cost determination.

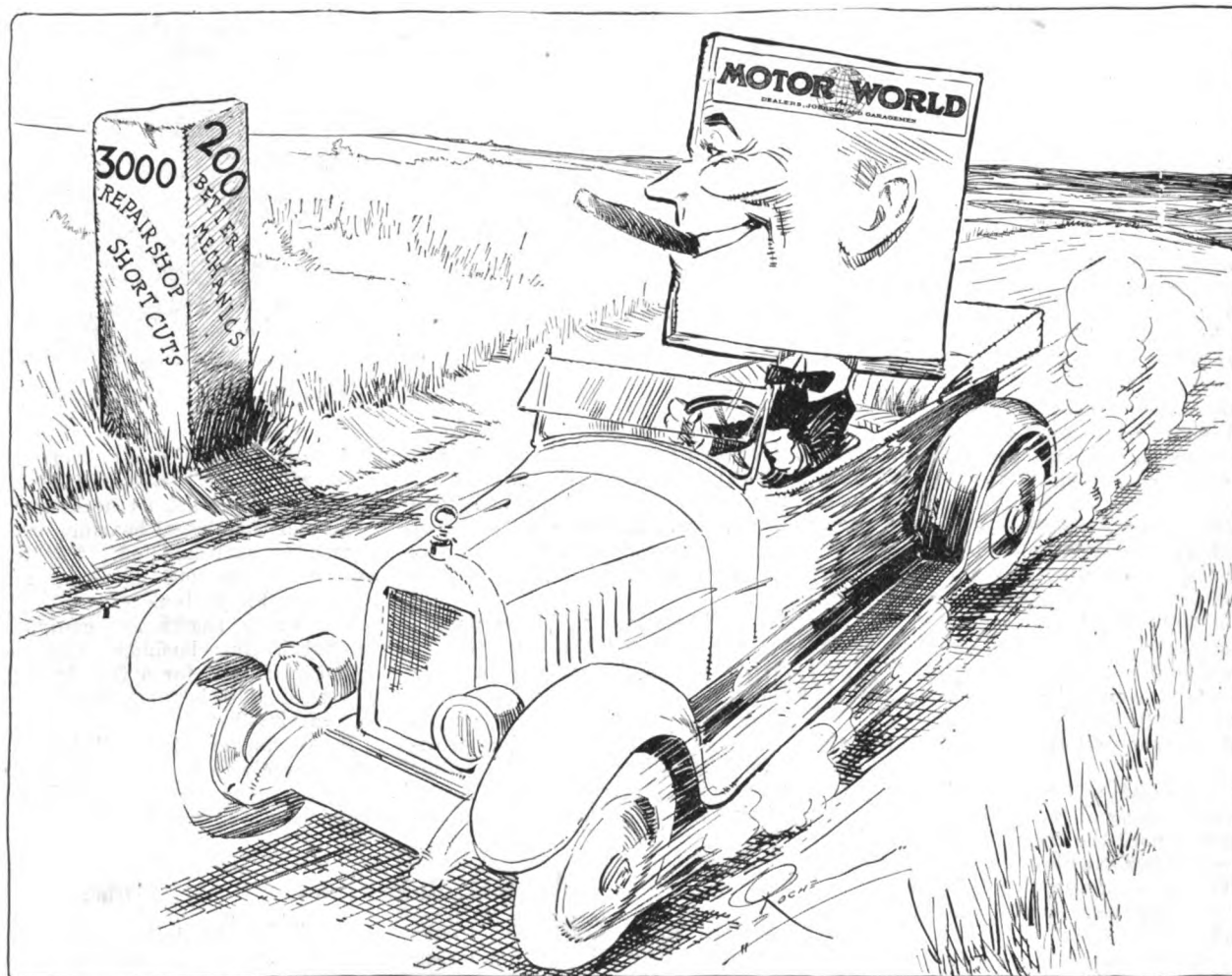
Coil Ignition for Motor Cars, by C. Sylvester, Sir Isaac Pitman & Sons, Ltd., Bath, England. Price \$4.—This book is intended primarily for the chauffeur and the owner-driver, although the service station mechanic will find it valuable. The first chapter deals with tools and instruments, fundamental electrical conceptions, and some repair operations. Succeeding chapters cover descriptions and operation of equipment, description of the ignition coil and ignition system, and different systems in current use.

Repairshop Shortcuts
No. 3000
In This Issue

Milestones in Mechanics

Better Mechanics
No. 200
Week Before Last

Well, That's Traveling Some!



THE Repairshop Shortcut Department was started in the issue of April 14, 1915, over six years ago, and with the exception of a very few special numbers there have been from seven to ten shortcuts in every issue. Many of these were originally secured by the editorial staff, but for the past several years, there have been so many contributions by mail that practically all of them are sent in and paid for. Shortcuts have been received from practically every city and town in the United States, and many come from foreign countries where automobiles are in use. The original copy varies from crude pencil sketches on brown wrapping paper to splendid drawings done with

drafting instruments. We do not care about the form, however, it's the idea we want.

Motor World thanks previous contributors and asks your continued cooperation in making this department a success.

INCIDENTALLY, it may be interesting to know that there is such a demand for copies of the shortcuts that the bound book of the first 1500 has gone through three editions and a second volume containing shortcuts 1501 to 3000 will be published soon.

The Better Mechanics Articles started in issue of December 12, 1916, and are published in book form.

Repairshop Shortcuts

No. 2999—Locking Gearset Gears.—In removing the universal nut or for other purposes it is sometimes convenient to lock the gearset gears together so that the mainshaft will not move. To do this, place the gearset in high gear and reverse gear at the same time.—F. Grady Cash, Cash Garage, Gaffney, S. C.

No. 3000—Jump Desk for Small Tools and Supplies.—A jump desk for small tools, drills, caps, screws, etc., is made as shown in the illustration. A convenient cover may be placed over the desk. When the lid is down it forms a desk and when hinged up forms a cover.—A. T. Devoy, Chicago, Ill.

No. 3001—Fluting a Tap.—For fluting a tap in an emergency or for making up a special thread, the threaded stock is placed in the center hole and a drill press use to drill down through the other holes. The stock is afterwards hardened and tempered.—S. E. Gibbs, Corydon, Iowa.

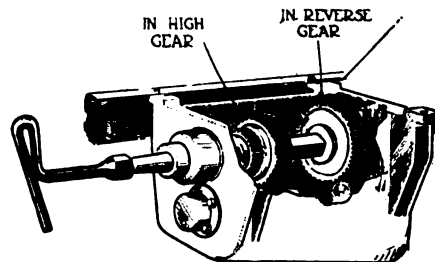
No. 3002—Puller for Small Anti-Friction Bearings.—A puller for small bearings, such as used on magnetos and generators, is made of a magneto magnet which is softened so that it can be drilled and tapped for the cap screws, as shown. The central bolt is $4\frac{1}{2}$ in. x $\frac{1}{2}$ in. with S. A. E. thread.—Glen E. Reamer, Hopkins Electric Co., Tulare, Cal.

No. 3003—Portable Light Stand.—This stand is made about 6 ft. high and anchored to a base heavy enough to keep it from tipping. The perpendicular has a ring at the top through which a cord passes, keeping the cord out of the water and mud.—D. H. Hollepp, Algona, Iowa.

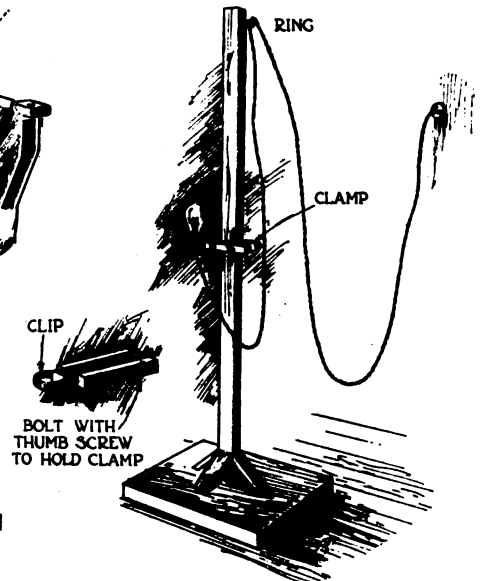
No. 3004—Increasing Life of Felt Washers.—A piece of spring wire placed in felt washer keeps the felt tight against the shaft as the felt wears.—S. E. Gibbs, Corydon, Iowa.

No. 3005—Battery Carrier.—A quarter-inch hole is drilled in each end of a one-inch pipe. Heavy wire is passed through these holes and bent to form hooks with which the handles are grasped.—Reader.

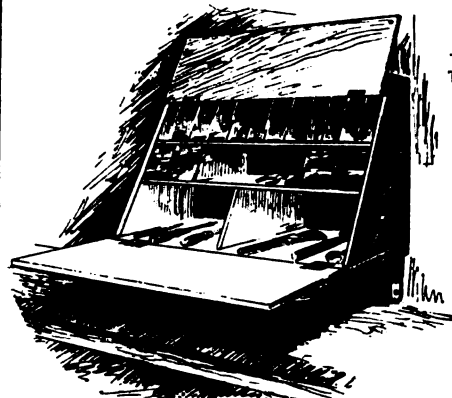
SEND in a sketch and a description of the device you doped out to make your work easier. Motor World will pay a dollar for every idea accepted for publication.



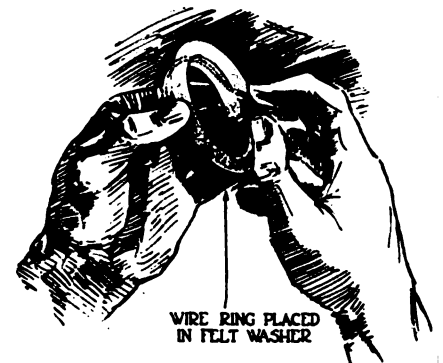
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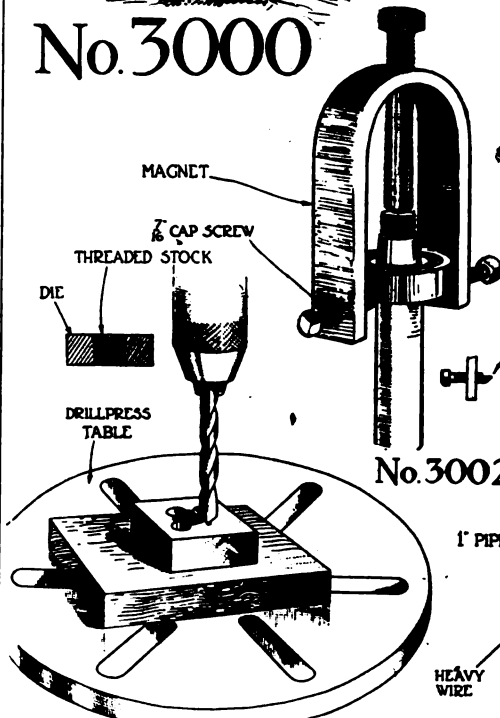
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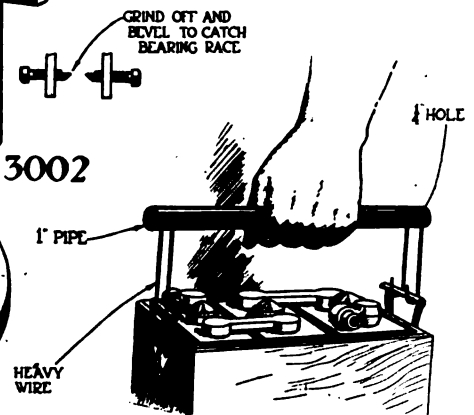
No. 3000



No. 3004



No. 3002



No. 3005

No. 3001

SYSTEM IN BUSINESS

This Department Is Intended to Assist Motor World Readers in Working Out Their System Problems—It Will Answer Questions Concerning System and Accounting

Some Accounting Problems That Puzzle Garagemen and Dealers

Do You Properly Record Inter-Departmental Transactions?—Figure Gross Profits on Accessories?—Read How

Editor Motor World: Should any percentage or amount be added to cost of merchandise sold by one department to another?

Where does loss or profit show up when a certain article is bought from different supply houses at different prices, but figured only at one price in the total cost of merchandise sold for the month? This evidently would not give a true profit.

Is it necessary to keep track of the various cost prices of a certain article?

Please explain journal entries of credit, memorandum received from a jobber on parts returned as defective, and credit memorandum received from jobber on an overcharge.—W. M. K.

Answer—Merchandise sold from one department of the business to another should be charged to expense of that department at cost. Where labor is performed by one department for another, this also should be charged at cost, and, if the cost is not known accurately, it should be estimated as nearly as possible.

In answer to the second question, profit or loss is shown at the end of the month on supplies sold that have come from different houses in this way: We assume that you use a system of sales tickets. You should mark on these sales tickets the cost of the article sold, so that at the end of the day, or week, or month, the accounting department can tell the total cost of the goods sold during the period by adding up the cost prices on the sales tickets. The total cost subtracted from the total sales gives the gross profit. This is most essential, for in the first place your percentage of mark-up should be enough at all times to give you a reasonable profit over and above operating expenses, and if you are not sure what your mark-up is, you may be operating at a loss.

The merchandise purchased from different supply houses is lumped and charged as cost of merchandise sold at one average figure. It surely would not give a true figure for profit.

This also answers your inquiry as to the necessity of keeping track of the various cost prices of a certain article. This can be easily done by use of an inventory cost card which would give you the names of the concerns handling this article, their list price, their discounts and their net costs to you.

In answer to your last inquiry, when you return parts to a jobber as defective, make an entry on your books charging accounts payable with the amount of the

part and credit the inventory stock account. The sending of a credit memorandum by the jobber is simply an acknowledgement that the charge is correct as presented by you.

In remitting to the jobber for bills payable, this credit memorandum is deducted from the total amount due. When a credit is received for an overcharge, a similar entry should be made, as the amount of the overcharge was originally charged to your accessory stock.

How to Ascertain Gross Profits of the Accessory Department

Editor Motor World: Please give us an idea as to how to arrive at the gross profits in our accessory department?—H. T. F.

Answer—As goods are purchased and received, the cost price should be noted either on the goods or their containers. Then as each sale is made—and we are assuming that you use some form of sales ticket—the cost price is put on the same ticket that records the sale. A code of some sort should be used in order not to let the customer know the cost of the goods; the bookkeeper at the end of the day computes the value of the goods sold on that day and makes his entries accordingly.

In order to find the number of various parts sold we suggest that you use a large sheet of ruled paper, heading the various columns with the names of those parts or accessories that are sold most frequently, then run through the sales tickets of that day and make an entry for each part sold in the proper column. The totals can be transferred to the inventory cards.

This may seem like a great amount of detail work and it does involve considerable labor. However, if you do the job daily, you will save yourself much of this unpleasantness.

Several splendid inventory systems have been described in this department during the last few months. We would suggest that you look through some of your back issues, as there is some helpful information on the operation of a perpetual inventory.

Entering a Trade

Editor Motor World: One of our customers bought a tire and we took a tire holder for part payment. How should the tire holder be entered?—S. G. T.

Answer—Assuming that the tire you sold brought \$30, a sales ticket should be made out, the customer's account charged and tire sales credited. The customer should be credited with the trade-in value of the holder and the accessory stock account debited. Your books would then show a tire sale of \$30, an account receivable of the difference between the value of the tire sale and of the holder, and an increase in the accessory stock account. In a transaction of this character, it should be remembered that the article is accepted in lieu of cash and it should be treated as money on the books. Failure to treat transactions in this way often causes difficulty.

SCIENTIFIC CONSTRUCTION

GARAGES

SHOWROOMS

REPAIRSHOPS

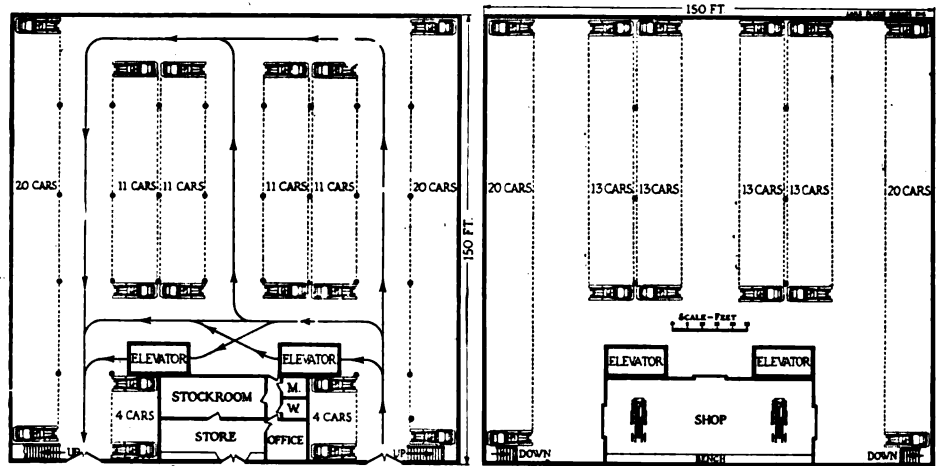
Conducted by DONALD D. BLANCHARD

Large Garage for Seasonal Trade

Ease of Car Movement Feature of Layout — Small Store, Stockroom, Office and Shop Included

MOTOR WORLD is glad to receive and answer inquiries for garage plans, but in order that there may be as little delay as possible in submitting the plans desired it is imperative that the following information be given: Size of plot, with rough sketch showing shape and its relation to adjoining plots; name and number of departments operated; number of cars to be shown in salesroom; number of cars in garage; any other pertinent details.

THE building illustrated on this page is designed for the use of a garageman in a summer resort city. The large storage capacity is necessary to take care of the seasonal trade. The building is 150 feet square and is divided into three storage bays. In each bay there are two rows of cars facing a central aisle, these aisles being connected by transverse aisles. Cars entering the garage use the driveway on the right of the building and follow the paths marked by the arrows to their destinations. Cars stored on the second floor in either the right or center bays should use the right-hand elevator on entering, and those stored in either the center or left-hand bays will find it most convenient to use the left-hand elevator when leaving.



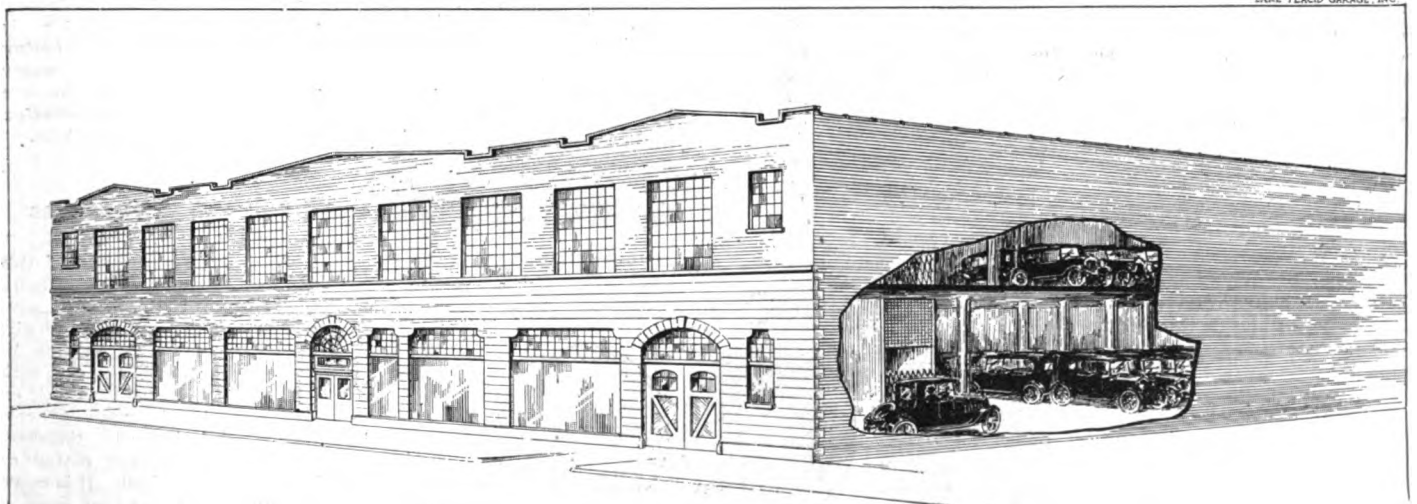
The indicated storage capacity of this two-story garage is 176 cars

There are eight rows of columns on the first floor, but they are so placed that they cause a minimum of interference with the storage and movement of cars. The spacing between the columns is such that four cars may be conveniently stored between them. There are but two rows of columns on the second story, as there is nothing but the roof to be supported there.

A small store, stockroom and office is placed at the front of the building between the two driveways. With this number of cars in storage, this garageman

has an unusual opportunity to sell supplies, accessories and touring equipment. Directly above on the second floor there is a small shop in which the maintenance work on the cars in storage can be taken care of.

In order to take care of the greatly diminished winter trade, it might be a good idea to have either the left or right bay on the first floor partitioned off from the other two. This would simplify the problem of heating the garage and at the same time provide sufficient space to take care of the winter storage trade.

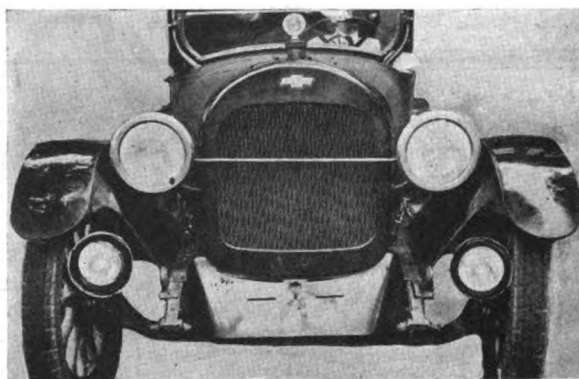


The accessory store, stockroom and offices are located between the entrance and exit driveways

Automotive Equipment

BREWER DIRIGIBLE HEAD-LIGHT

This device consists of two lamps similar to the ordinary headlight, but about the diameter of the average spotlight. These lamps are attached to the steering spindle by means of a specially constructed bracket, one light being placed on each spindle. Consequently, the lights turn with the wheels and illuminate the road in the direction of motion.—Brewer Automobile Headlight Co., Cedartown, Ga.



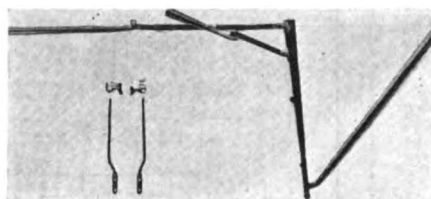
Brewer Dirigible Headlight

PENNSYLVANIA MODEL N PUMP

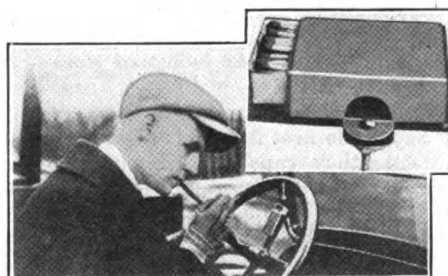
A five gallon gasoline pump completely enclosed in a water-proof housing especially designed for curb installation. All iron parts coming in contact with gasoline are galvanized to prevent rust. The cylinder is made of seamless brass tubing. The valves are also made of brass and are readily accessible. The crank is hinged so that it may be turned inside of the housing and the door closed and locked. A 100,000 gallon meter is standard equipment and there is a 20 gallon counter for recording individual sales. A positive filter is built into the base of the pump. The pump is regularly furnished with the housing finished in red, black dome and light standard with gold striping.—National Store Specialty Co., Bareville, Pa.



Pennsylvania Model N Pump



Pontiac One Man Top Outfits



B. R. Match Box Holder

PONTIAC ONE MAN TOP OUTFITS

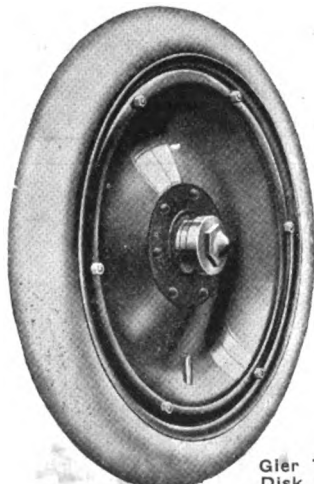
The outfit includes the bow socket and the necessary windshield attachments. Each half of the set consists of an upright rod which is attached to the Ford windshield hinge lower half by simply removing with a screw driver the two screws used to assemble this part to the windshield frame, placing the upright in position and replacing the screws. The other members consist of a clamp shaped device provided with a thumb screw which is attached to the inside of the front or outrigger bow of the top by means of the large wood screws furnished with the outfit. The entire outfit is finished in baked black enamel and is packed in a compact case. Price per set, \$7.—The American Forging & Socket Co., Pontiac, Mich.

B. R. MATCH BOX HOLDER

The holder is made of 26 gauge iron and has the dealers advertisement printed on the top. A clamp is provided which fits on the spoke of the steering wheel. It is finished in either black or aluminum. Price 12 cents each in small lots ranging down to 7 cents each in quantities of 5000 or more.—Newton Mfg. Co., Newton, Iowa.

GIER TUARC STEEL DISK WHEEL

Complete interchangeability with wood wheel is made possible by the use of a regular wood wheel hub and demountable rim. The wheel is also provided with an outside valve stem. The disk itself is of convex-concave design.—Motor Wheel Corp., Lansing, Mich.



Gier Tuarc Steel Disk Wheel



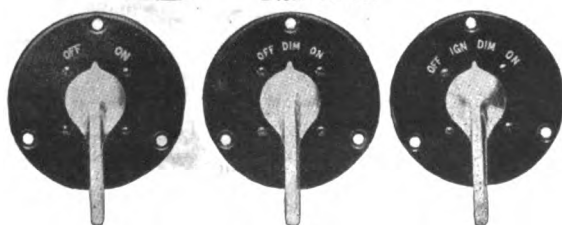
Perfex Radiator for Fords

PERFEX RADIATOR FOR FORDS

The material used in making the cores of this radiator is a special bronze which is said to resist the effects of alkali. The thickness is .005 of an inch. The tanks are made of 18 gauge metal and the radiator is mounted on a special spring bracket. The tubes or water passages that make up the core have only one seam.—Perfex Radiator Co., Racine, Wis.

KICK TYPE TRUCK SWITCHES

This type of switch is built particularly to stand rough service on commercial vehicles. It may be mounted either on the dash or footboard, and in this way may be operated by foot or hand. It is equipped with an especially large lever, which facilitates easy movement with heavy drivers' mittens or gloves. It is made in six different models. Prices range from \$2.15 up to \$2.70.—Briggs & Stratton Co., Milwaukee, Wis.



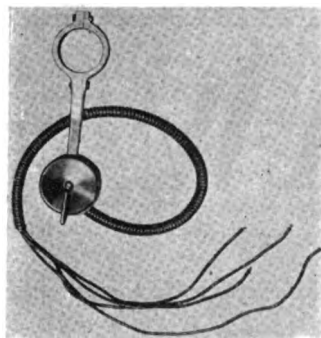
Kick Type Truck Switches

RICHARD SOLDERLESS BOTTOM OILER

The bottom and dome of this can are put in without cement, solder or brazing. It is so constructed that it is practically in one piece. It is said to be impossible to make this can leak by dropping it or throwing it on the floor. It is made of cold rolled steel brightly polished, nickel plated, copper plated or lacquered, as desired. It is made in 1/2-pt., 1-pt. and 1-1/2-pt. sizes.—The Ansonia Novelty Co., Ansonia, Conn.

UZ-UR-THUM LIGHT CONTROL SWITCH

This switch consists of a black vitrified rubber switch mounted on an aluminum arm which clamps to the steering post at an angle which locates the switch head just below the steering wheel spokes. The thumb is used to operate the switch which controls the brilliancy of the headlight. A black enamel cable incasing the conductor wires leads from the switch head to the terminal panel where the ends of the wires are connected. Price \$3.95.—The Thumb Accessory Co., Sebewaing, Mich.



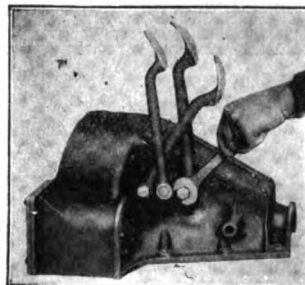
Uz-ur-Thum Light Control Switch

PANEL REPLACEMENT SWITCH

These switches are designed to be used for replacing the ignition and lighting switch assembly on any instrument panel when the balance of the panel is in good shape. They are made in three types: No. 2062 Battery Ignition type, 3 positions, Off - Dim - On — \$2.75; No. 2075 Magneto Ignition type, 3 positions, Off - Dim - On — \$3; No. 2076 Battery Ignition type, 4 positions, Off-Rear-Dim-On — \$3.25.—Briggs & Stratton Co., Milwaukee, Wis.



Panel Replacement Switch



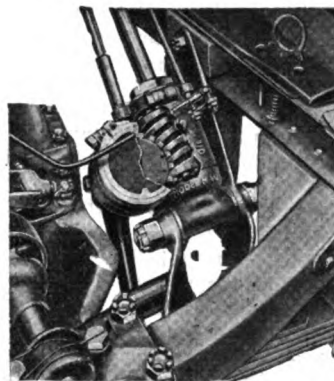
Michon Outside Adjusters

MICHON OUTSIDE ADJUSTERS

Ordinarily, the adjustment of the brake and reverse bands on the Ford requires removal of the transmission cover. These adjusters bring the adjustment nut outside, so that the adjustment can be made by simply lifting the floor boards. The installation is said to be simple. Price, \$3 per set.—Michon Mfg. Co., 124 North Erie Street, Toledo, Ohio.

WORM STEERING GEAR FOR FORDS

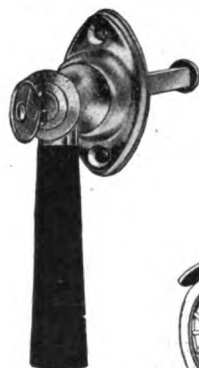
This gear is attached to a Ford car by means of bolts, and it is not necessary to drill any holes or cut any rods. The gear is said to be very ruggedly constructed throughout. Price, \$30.—Union Sales Co., 914 North Eighteenth Street, Omaha, Neb.



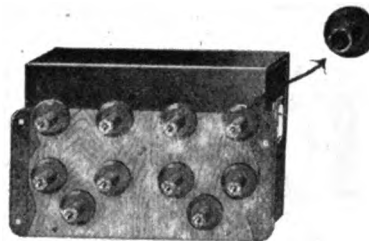
Worm Steering Gear for Fords

LOCKING DOOR HANDLE FOR FORD ENCLOSED CARS

This locking handle is attractively finished and eliminates the danger of theft of the contents of a car, as of the car itself. The installation is said to be simple, as it is only necessary to drill two holes in the door for the mounting screws and counterbore them for the retaining lugs on the base plate. In ordering it is necessary to specify whether the handles are for use on the coupé or sedan, since there is a slight difference in the doors of these two models. Price, per set of two \$10.—Briggs & Stratton Co., Milwaukee, Wis.



Locking Door Handle for Ford Enclosed Cars



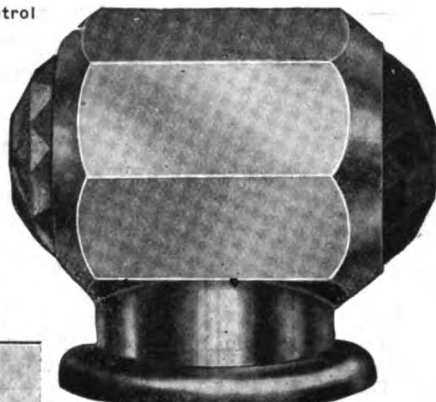
Short Cuts for Fords

SHORT CUTS FOR FORDS

This is a protective device which is slipped over the porcelain terminals at the Ford coil box. It is said to prevent short circuits between the various terminals which are caused by dampness. Price \$1.—Philbrick-Lovering, 169 Massachusetts Avenue, Boston, Mass.

RADIA PARKING LAMP

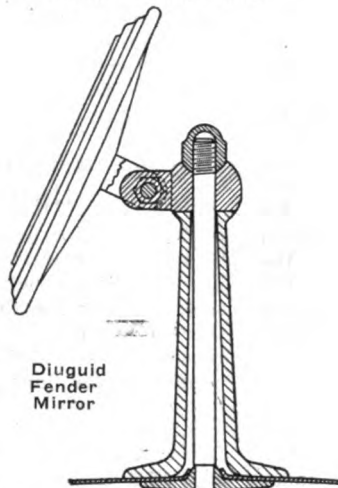
This lamp is said to be made from a strong casting carefully machined and finished and is attractively finished. The base is made so the lamp cannot turn, nor can it be put on unless the white glass is toward the front. The electric bulb is accessible and easily changed. The finish is bright, polished aluminum.—Radia Products Co., Baltimore, Md.



Radia Parking Lamp

DIUGUID FENDER MIRROR

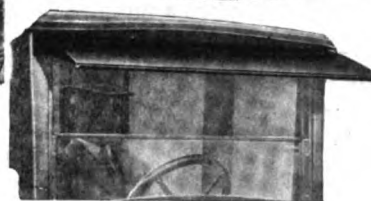
The mirror bracket is a solid brass casting and is furnished with either nickel or brass finish. The construction of this bracket is very rigid, and it is attached to fender by means of a bolt which passes through the fender as shown in the cross section drawing. The mirror can be easily and quickly adjusted to any desired angle. The metal parts are guaranteed not to rust. Price—\$15.95.—Diuguid Bros., 975 Atlantic Ave., Brooklyn, N. Y.



Diuguid Fender Mirror

VULCAN VIZOR

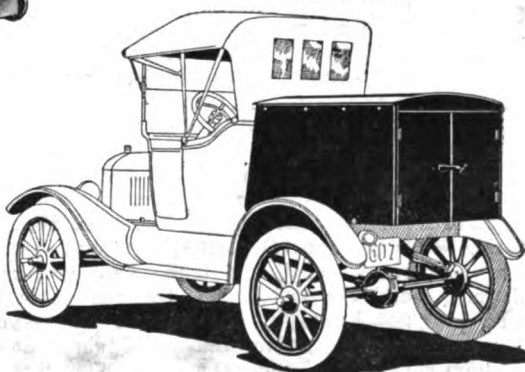
These vizors will be produced in three types. A fixed type universal for all closed cars with straight fronts known as type "A". Type "B" is a universal adjustable type for all enclosed cars. The vizors are made of Armco rustless, cold rolled, 20 gauge steel and are non-rattling. The finish is a special dull black effect in baked enamel. All types \$4.50.—Jenkins Vulcan Spring Co., Richmond, Ind.



Vulcan Vizor

STEEL SLIP-ON BODY FOR FORD ROADSTERS

This body is designed so that it may easily be mounted on the chassis by removing the regular rear deck of the roadster. It is fastened in place by means of special bolts furnished with the body. The main frame is constructed of hardwood reinforced at joints with special irons. The floor has a removable section to give access to the storage battery. The sides, top and double rear doors are made of sheet steel panels. The rear doors are provided with special fastenings. The new body is designed for shipment completely knocked down. The dimensions of this body are 40 in. by 32 in. by 24 in. It is finished in black enamel.—Martin-Parry Corp., York, Pa.



Steel Slip-on Bodies for Ford Roadsters

THE LAW

By GEORGE F. KAISER

Perplexed?

Does some point of law perplex you?

Why don't you ask MOTOR WORLD's legal editor to discuss the question?

A Price Reduction Question

Editor Motor World: In the following, the customer, banker, and myself are entirely agreed as to the facts, and the question is whether it was proper for the bank to act on the customer's request or order stopping payment of the check.

On June 7, 2:30 p. m., our salesman sold a new Ford truck to the customer, accepting his old Ford truck in trade and his check for \$425. The salesman immediately turned this check into our office, and our bank deposit was made up at 3 o'clock and taken to our bank by the bookkeeper, the customer's check being written on the same bank. The bookkeeper arrived at the bank a few minutes after 3, the doors being closed, but he got them to open the doors and got the bank to accept our deposit, giving credit for same in the pass book. At 5 o'clock the same afternoon the customer saw a report of Ford prices reduced, telephoned the bank stopping payment on the check—which the bank did.

We believe the customer would have difficulty in establishing a reason for stopping payment of the check, for in trading an old car for a new one the difference, as a rule, remains about the same regardless of a revision in prices downward or upward. We made the new prices effective on the morning of June 8.

Our contention is that the depositing of this check at a few minutes after 3 o'clock is notice to the bank that \$425 was to be transferred from the customer's account to our account, and under this interpretation a request to stop payment, coming two hours later, should not have been acted upon.

The bank's contention is that they close for business at 3 o'clock, opening at 9 o'clock the next morning; and as both the depositing of the check and the stopping of payment request happened while the bank was supposed to be closed, the two would start with an even break at 9 o'clock the next morning. And they acted on the stopping of payment rather than the transferring of this amount from the customer's account to our account.

We feel that the bank is trying to interpret this on bookkeeping technicality and that it would not stand before law.

We would appreciate your opinion in an early issue of the Motor World.—L. F. S., Madison, Wis.

Answer—Understand first of all, that, from the facts as you state them, I cannot see that the customer had any right to stop payment on the check, and having stopped payment on it you can sue him on it—and I know of no reason why

you should not get judgment for \$425 and costs.

As to the bank—ordinarily it is a bank's duty to stop payment on a check when a depositor instructs it to do so, if the check has not already been paid. As the only thing the bank needed to do to pay the customer's check, as you also had an account with it, was to make a bookkeeping entry. I do not think its stand about being closed, etc., is well taken. It seems to me from the facts as you state them that the bank must have actually credited your account with the \$425 before the stop notice was received and that, therefore, it was ineffective.

Under the circumstances the proper method of procedure for you is to place the entire matter in the hands of your local counsel and let him straighten it out as best he can.

In any event you are entitled to \$425.

Represented Fitness Implies a Guarantee

That when a used motor car is sold to a person engaged in some particular line of business, with the understanding that it is fit for that certain business, there is an implied warranty that it is reasonably suited for that purpose, according to the Supreme Court of Oregon in a recent case.

Suit was started to recover damages for alleged misrepresentations in the sale of a used car. The case was tried before a jury and the car owner recovered a judgment of \$450 against the dealer.

The car owner alleged that the dealer had falsely and knowingly represented to him that the automobile was of the value of \$400, was in first-class repair and in good condition to be operated; that the gears, bushings, brake, pinions, tires, engine and magneto were all in excellent condition. That, in fact, they were all worn out and the engine was useless and worth not more than \$50. The dealer denied all these contentions.

The court held that, as the car had been sold as fit for a special purpose, there was an implied warranty that it was sold, and that as the document, which was a blank form of contract, contained nothing but the words "one Maxwell, \$400" and "Deposit, \$400," and was not signed until the trade had been made and the price paid, the purchaser was not bound by the printed clauses contained therein, but could show at the time the car was sold.—(Bouchet vs. Oregon Motor Car Co., 152 Pacific, Ore. 888.)

Dealer May Sue Bank

Some time ago I explained for the benefit of the readers of Motor World the effect of accepting a check with the endorsement, "paid in full." Just a few days ago a dealer asked me a question about another kind of a check—one that is returned by a bank marked "not sufficient funds."

In the case which I was asked about it appeared that the dealer's bank had returned one of his checks bearing the above indorsement. As a matter of fact, this was done through a mistake on the part of one of the bank's employees who confused the account with the account of another man bearing the same name. Of course, the fact that the check was so marked did not do the dealer any good in a business way, as the dealer was located in a small town where such news travels quickly.

I advised the dealer that he had a good lawsuit against the bank, but that in a case of this kind it is difficult to say just how much damage was done by the bank's wrongful act.

One jury may award very substantial damages in a case of this kind while another jury may think a businessman is only entitled to very little by way of damages. If a dealer can show actual damage, however, he can feel pretty sure of being awarded a very fair sum as damages especially so if he can show that he was injured by loss of credit or trade.

Garageman's Lien Has Priority

Editor Motor World: A car from Maryland worth \$300 was wrecked and brought to us for repairs by the owner, who owed a financing corporation about \$200 on it.

We reluctantly repaired it at an expense of about \$275. We have held the car about six months, but it is evident that the owner will not pay for the work.

What procedure is necessary to recover the cost of repairs? Have we a prior lien over the financing corporation? Can we be held liable by the financing corporation if we sell the car?—C. H. G., Springfield, Mass.

Answer—Yes, you have a lien in Massachusetts and can hold the car and foreclose your lien. Do not attempt to foreclose without the assistance of a lawyer. I believe your lien takes priority over the lien of the financing company, but your local counsel can tell you that better than I can so long as it is necessary to retain him anyway.

New Rochester "Six" Engine Has Overhead Valves

BOTH racing and commercial practice are combined in the new Rochester six-cylinder engine. It differs materially from the Rochester-Duesenberg four, which has the horizontal valve and vertical rocker arm. The new engine has six cylinders and uses an overhead valve with overhead rocker arm action. The cylinder dimensions are 3.6 by 5 in. and the maximum horsepower is 80 at 2600 r.p.m.

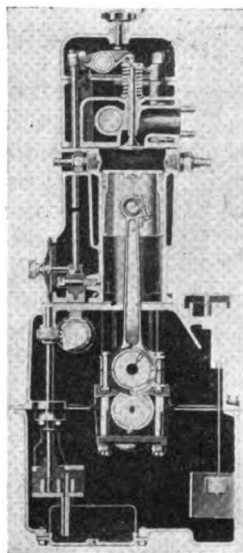
On the right side of the cylinder block there is nothing except the water outlet and the valve adjustment cover plate. The exhaust manifold is bolted on the left side of the engine, and the carbureter, which is of a horizontal type, as the intake manifold is integral with the cast iron cylinder head, is also located here.

The pistons are aluminum alloy of the constant clearance type. The piston head is partly separated from the skirt by means of a slot which offsets the normal expansion of the metal. The pistons are of the flat head type and are equipped with three rings all above the wrist pin.

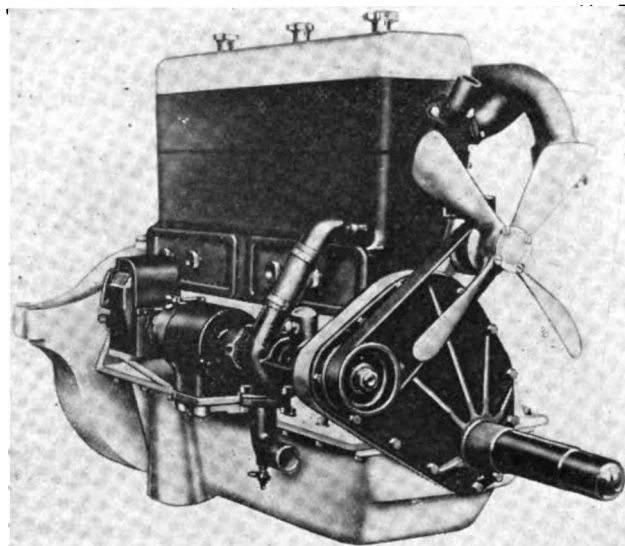
The valve mechanism consists of a train of three gears, these being respectively connected with the crankshaft, water pump and camshaft. The camshaft gear is made of Bakelite. The engine is lubricated by the full force feed system. The oil is pumped by a gear-driven pump operated from the camshaft. The entire oil pump may be removed as a unit from the base of the engine for cleaning. The oil is forced to the main and connecting rod bearings as well as to the camshaft and rocker arms. Overflow from a release valve lubricates the water pump shaft and timing gears.

The cooling water is circulated by a gear-driven centrifugal water pump. The fan pulley is located at the forward end of this shaft which also takes care of the generator, distributor and magneto drive. Either battery or magneto ignition may be employed on this engine.

The manufacturer is the Rochester Motors Corp., Rochester, N. Y.



Left—Cross-sectional view of the new Rochester Six engine, showing valve mechanism and oil pump drive



WHYTE MOTORCONTROL HAS IMPORTANT ADVANTAGES

THE elimination of body wiring, dispensing with the mounting of instruments on the dash, reducing the job of wiring a chassis and body to a single operation are the salient features of the Whyte Motorcontrol.

On automobiles, as at present constructed, a large amount of wiring has to be done on bodies in order to connect the dash board control and the instruments on the board with their corresponding mechanisms on the chassis. When a body is placed on a chassis the body and chassis wiring must be hooked up, and the speedometer shaft, oil pressure gage, etc., also must be connected.

With the Whyte Motorcontrol all this is eliminated, inasmuch as the unit comprises a steering gear in which is incorporated in a compact yet accessible manner the speedometer, oil gage, ammeter, electric switches, horn button, steering connections, clock, cooling water thermometer, etc. Therefore, when the steering column is mounted on the frame the only connections that need be made after the body is mounted are at the bottom of the column, where the body wiring is brought up and connected to the fuse or junction box of the Motorcontrol. This can be done under conditions where a man is not hampered by lack of space in which to work.

From the illustration it will be noted how compactly the unit has been designed. Even running the wires, oil tube, speedometer shaft, choke wire, water temperature tube, and spark and

throttle rods through the column has not increased the diameter of it over the usual columns.

Accessibility has been one of the chief factors in designing the unit. By taking out four screws at the back of the case the cover can be removed, exposing all instruments and all wiring back of them. Each instrument can be taken out individually by removing the screws which hold it in place. The small light which illuminates them can be slipped out at the back of the case without removing the cover. The wires going through the column are of a different color and thus can be identified for connecting at the top or bottom. Inasmuch as all wiring is protected by a steel tube in the column there is no chance of a breakdown in any of the circuits. Any circuit can be tested by merely wiring around it from the fuse box to the connections on the switch. The same key which locks the switch also locks the fuse box cover.

The Whyte-Duffield Mfg. Co., Chicago, is the maker of this device. Obviously it will be sold to car and truck manufacturers direct for installation as standard equipment.

Trade Literature

The Products of Paul G. Niehoff & Co., Inc., Paul G. Niehoff, & Co., Inc., 232 East Ohio Street, Chicago. An 80-page book in which are cataloged all the products of this company. The first section of the book is devoted to the description of replacement parts for the for the various makes of electrical systems. Following this come descriptions of service station equipment. The last section gives specification tables showing the parts used in various cars.



On a car equipped with a Whyte Motorcontrol, the instruments are mounted on the steering column

New Bill Asks Special License Tax

MEASURE IN LINE WITH TREASURY'S PROPOSAL

Congressman Appleby (N. J.) Proposes Federal Fee for Cars and Trucks

WASHINGTON, Aug. 3.—Congressman Appleby, of New Jersey, has introduced a bill providing for a special license tax on automobiles and for a Federal license tax for motorists. The broad principle of his bill is in line with the proposal of the Treasury Department that a Federal license tax should be imposed as a part of the internal revenue bill. A reciprocal feature would carry out the principles for which the National Automobile Chamber of Commerce and the American Automobile Association and other automobile organizations have sought in a legislative manner.

In an interview with Motor World Congressman Appleby to-day said that he had not estimated the probable revenue that would accrue from the license tax. He appeared before the House Committee on Ways and Means and explained his bill to-day. Ninety per cent of the revenue derived from the licenses go to the Federal Government and 10 per cent to the State. The rate as proposed by the Appleby bill would be forty cents per horse-power or a fraction thereof, in the case of all vehicles having pneumatic tires, with a minimum charge of \$5 for any motor vehicle. For each motor vehicle equipped with solid tires and having a rated carrying capacity of not more than one ton, \$10, and \$10 for each additional ton up to 7 tons, when the Federal rate would be \$70. Motorcycles would be obliged to pay \$3 per year, with an additional tax of \$1.50 for each side-car. Manufacturers of or dealers in vehicles other than motorcycles would be obliged to pay \$3 for each registration tag, and registration tags would be interchangeable among the cars owned or used by such manufacturers or dealers during the current year for which the tax is issued, and would be allowed to be used only on new vehicles being brought under their own power from a factory to a dealer.

It is further provided that "No such dealers' tags shall be used on any car employed in transportation for hire or livery business. For each registration tax issued a dealer in motorcycles, \$1.50, such tags to be interchangeable as in case of dealers in other motor vehicles. For each rubber-tired vehicle with a carrying capacity of one ton or less, trailed or propelled by any motor vehicle on which a Federal license is required to be displayed, \$5; and \$5 additional for

each additional ton of carrying capacity or fraction thereof."

It is significant to note that the Appleby bill provides that the charges which it prescribes shall be for the twelve months' period, "and shall in no way conflict or interfere with the license fees imposed by the respective States."

The administration of this proposed act would be vested in the Bureau of Public Roads, after authority had been conferred upon them to negotiate with motor commissioners of the various States. The penalizing provisions of the bill call for a fine of not less than \$50 nor more than \$200, when any person operates an automobile without a Federal license. A Federal license is not obtainable until the State authorities have been convinced that the applicant for a license is qualified to operate a motor vehicle upon a public highway.

Section 2 of the Appleby bill would authorize the reciprocity of licenses between all States. A measure of a similar nature is now pending before the Congress and is known as the Pittman-Sweet bill. The Federal registration tax would be affixed and would form a part of the State license tax, which tax could be recognized by the authorities of the several States, as permitting the owner of the automobile to whom the license was issued, to operate the machine within the confines of any State he may be visiting, or through which he may be passing, without any additional registration or the securing of any other license or tax, or the payment of any additional tax.

Congressman Appleby also proposed a plan to the House Committee on Ways and Means to impose a stamp tax which would yield approximately \$45,000,000.

NEW FIRM TAKES OVER BUSINESS OF H. G. ROOT

SPRINGFIELD, OHIO, Aug. 2.—With a capital of \$300,000 the Automotive Supply Co. was organized to-day to take care of the wholesale business of the H. G. Root Co. J. L. Zismer was elected president and treasurer and L. W. Peaz, secretary. Besides these men the directors are H. G. Root, general manager of the Westcott Motor Car Co., J. Stanley Weigel and W. C. Webster. The new company will take over the wholesale business of the H. G. Root Company Aug. 1.

Speaking of the new company, Zismer said: "We will carry all kinds of automobile supplies. Retail stand will be maintained as usual. We will operate the wholesale business in Springfield and Columbus and will develop this wholesale automotive supply business in this territory."

ACCESSORY SALES IN INDIANAPOLIS BRISK

Dealers in Hoosier City More Optimistic Than Distributors of Cars

INDIANAPOLIS, Aug. 3.—Dealers in automobile accessories here appear to be more optimistic concerning business for July and for the remainder of the year than motor car dealers. The latter, who also handle accessories, admit that the accessory business has been fair while showing a pessimistic turn in discussing car sales. In accessories for smaller cars, such as the Dodge and Ford, shock absorbers head the list. Dealers say that the demand for bumpers, special wheels, spot lights and locks has been very good, better, in fact, than was expected.

Latest bank reports show business in the banks to have increased materially during the past six months of 1921 and savings accounts to have shown more than their proportionate share of increased business. In spite of this fact, Indianapolis bankers are more cautious than usual in lending money. Automobile finance organizations, which finance the purchaser on a payment plan, appear to have plenty of money at the present time, and report that since June 15 much better credit conditions have prevailed. Many accounts which have been past due for weeks have been paid up, and payments now are being made regularly. The percentage of non-payment is less than it was this time a year ago.

JORDAN SHIPS 10% MORE CARS IN SECOND QUARTER

CLEVELAND, Aug. 2.—Distributors here for a meeting at the factory of the Jordan Motor Car Co. were told that factory capacity for the next four months has been sold and that production will be maintained at the organization's highest average. The Jordan company during the quarter just ended shipped 10 per cent more cars than in the same period last year, which was the peak of the automobile sales boom. Distributors reported fewer cars on their floors July 15 than at any previous time in the company's history. This is attributed to the sales increase which followed the price reductions in May.

Cyclone Truck Down \$115

GREENVILLE, S. C., Aug. 1.—The Cyclone Starter & Truck Co. has reduced the price of its Cyclone truck from \$2,800 to \$2,685. This price includes steel cab top with curtains, windshield, starting and lighting equipment.

WITWER AGAIN HEADS REO IN KANSAS CITY

Organization Returns to Its Old Home with Southwest Motor Company

KANSAS CITY, Aug. 1.—The Reo passenger car and truck wholesale and retail distribution for Kansas City and territory returns Aug. 1 to its original home, The Southwest Motor Company. Reos were sold by this company at 1612 and 1614 Grand Avenue from 1910 to 1919, making the longest continuous representation in one location in Kansas City motor car history, and the resumption of representation by the company at this location further strengthens the record. The company has the same territory for Reos as before, including western Missouri and northern and eastern Kansas. In the interval of two years that Reos have been handled by another company, the Southwest Motor Co. has distributed and retailed Jordan passenger cars. There will be a separate traveling force and sales organization for the Jordan. The company has not handled a truck in the past two years.

J. Frank Witwer, president and general manager of the Southwest Motor Co. has maintained the splendid service organization which contributed so largely to his success with Reos, and during the past four months has reassembled a sales organization for Reo wholesale and retail work. H. F. Loechler is vice-president of the Southwest Motor Co., J. U. Oelsen is secretary; both of these having been officers for some years. Sam W. Kidd, formerly territory man for Buick and for Paige, Carl B. Lutz, formerly district manager for Paige and W. D. Brindley of Wichita, widely known in the west as a Reo traveler, will cover territory. W. F. Mather and C. F. Albertson will handle retail sales.

15 Years in Business

Witwer has been fifteen years in the motor car business here, early as manager of the Studebaker branch, then organizing his own company and in 1910 buying interest in the Southwest Motor Company of which he became vice-president and general manager. Building large success in distribution of Reos he gathered a larger control of the company by stock purchases, becoming president. He is the third oldest distributor in Kansas City; was for three terms president of the Kansas City Motor Car Dealers' Association, has served six years as director and is now a director. The formal representation of Reos began Aug. 1. Sales organization and service organization meetings had been held before that date, and on Monday the entire personnel that was assigned to Reo work plunged with enthusiasm into the promotion of these cars and trucks. The company is in an enviable position to enter this work, since its representation of Jordan during the two years has so well maintained its prestige for cars and service.



Newark Dealers Play a Day

Aquatic sports, broom-polo, driving (nails, not cars) and many other diversions, including a fine dinner, banished business for a day, Thursday, July 21, when the Newark dealers and their organizations toured to Lake Hopatcong, N. J., as the guests of the Newark association. Don't see Claude Holgate, the secretary, in the picture? Well, maybe that group of bubbles marks where he was

Two Reo Models Cut

DETROIT, Aug. 1.—New prices have gone into effect on the Reo touring car and roadster. The new prices for the touring car and roadster are \$1650, as compared with \$1850.

PRICES ON ALL MAKES OF H. C. S. ARE REDUCED

INDIANAPOLIS, Aug. 1.—Effective to-day, prices on all models made by the H. C. S. Motor Car Co. are reduced \$200 in price. The roadster and 4-passenger touring car are cut from \$2975 to \$2775, the coupe from \$3650 to \$3450 and the sedan from \$3850 to \$3650. Prices are f.o.b. factory. Prices were guaranteed until Aug. 1.

Coupled with the price reduction comes the statement that instead of producing nine or ten cars a day as at present, the plant output will be cut to five cars a day which is the normal capacity.

Officers of the company say that under no circumstances will production be increased.

Eastern Truck Orders Good

SPRINGFIELD, OHIO, Aug. 1.—Business is going along about as usual at the plant of the Kelly-Springfield Motor Truck Co. The large plant is being operated with a light force, taking care of the demands of the trade. A. K. Stewart, general manager of the plant, stated before he went to New York City, that he

UTICA PLANS CENTRAL USED CAR EXCHANGE

Idea of Dealer Association Expected to Bring Better Results in Sales

UTICA, N. Y., Aug. 3.—The Utica Motor Dealers Association, Inc., is planning to establish a central used car exchange, plans to this effect being discussed at a meeting held yesterday afternoon in Hotel Martin and presided over by W. R. Schiller, the president. It is believed greater business can be created for the motor dealers by the establishment of a central exchange.

It was also decided to have in the future separate meetings at which the problems of the motor truck business will be discussed. While the passenger car and the motor truck business have a great many things in common, there are certain angles in selling trucks that do not come in the passenger car end of the trade, and for this reason it was decided to hold separate sessions, which will be attended by motor truck dealers only.

felt that a larger force would be employed within a short time. The company has been gradually reducing its surplus of trucks. Orders from the East especially have been good lately.

OREGON SHOWS LARGE REGISTRATION GAIN

First Week of July Doubles Figures for All of June

PORTLAND, ORE., Aug. 2—While registration figures on the sales of new cars throughout Oregon indicated that the month in this State had been scarcely one-third normal, the month of July in Oregon, according to indications, will be unusually heavy in sales of new cars, and when registration figures are known within a few days after the end of the month it is expected they will show the month this year well up with sales of July, 1920.

The reason for the poor showing in June was that dozens of buyers of cars during the last portion of that month asked that delivery be deferred until after July 1, thus putting off registration until after that time. This was done because, according to the Oregon registration laws, all licenses taken out during the first six months of the year must be paid for on the full yearly basis, while after July 1 only half-year licenses are required. Thus by deferring taking delivery on cars which they had purchased until after the first of the month purchasers were able to have their license fees cut in half.

Registration Figures

Total registrations for June this year in Oregon were 2115 automotive vehicles, according to the report of the Secretary of State's office, of which number 889 were new passenger cars and trucks. During the first week of July registrations were 4200 cars, approximately half of which were new automobiles and trucks. Thus during the first week in July twice as many cars were licensed as during the entire month of June.

"The public was anxious to buy, but willing to leave the cars in storage for a few days to get advantage of lower license fees," said Ralph Staehli, secretary of the Automobile Dealers Association of Portland. "The public is buying cars in Oregon. It is true that the public is buying more carefully than it did before, but it is in turn getting bigger values than ever. Not only have prices declined to near pre-war levels, but in almost every case there are about 25 per cent more automobiles than there were before the price increase.

Steps to expand the Oregon Automotive Dealers Association, the State-wide organization of dealers which is affiliated with the National Automobile Dealers Association, were taken in Portland on July 20, when a meeting of representative dealers throughout the State with P. F. Drury, assistant general manager of the national association, was held. The State association had been rather inactive lately, but at the meeting it was determined to go ahead with an active membership campaign to get every live dealer in Oregon enrolled with the association.

COAST DEALER ESTABLISHES FREE CLASS FOR NEW CAR OWNERS.

SAN FRANCISCO, CAL., Aug. 3—The Anderson-Smith Motor Co., distributor of the Chevrolet for this district, has opened a class for automobile owners in general, and Chevrolet owners in particular, meeting at 8 p. m. every Monday. The classes are free to the public and in them everything about the automobile from the head to the tail-light will be explained, and instructions given for the care and upkeep of automobiles. Lecturers from the Chevrolet factory will handle these classes and at least half an hour each evening will be devoted to questions from automobile owners and answers by experts.

Interest in Hoosier Show

INDIANAPOLIS, Aug. 3—John Orman, manager of the Indianapolis Automotive Trade Association, says the demands for space from the retail car dealers of the city for the show to be held at the State fair grounds are heavier than they have been in the past. There appears to be more interest being shown than during any other show by the demand for space reservations.

N. A. C. C. BREAKS WITH UNDERWRITERS' BODY

Severs Relations With Chicago Laboratories After Tilt Over Car Grouping

NEW YORK, Aug. 2—The National Automobile Chamber of Commerce has definitely severed relations with the Underwriters Laboratories at Chicago, an adjunct of the Underwriters Association. The last straw was the determination of the Laboratories to group cars as to mechanical construction.

The activities of the Underwriters Laboratories are regarded as too detailed. The inspections interfere with the routine of factory production and result in classifications which are illogical. Parts makers who do not submit to the laboratory tests do not get ratings and as a consequence a car may be unfairly listed because not all of its parts have been supervised, although they may be just as good or better than those which have been inspected by the laboratories.

Few accidents to-day are due to faulty construction and automobile makers feel that nothing is gained by the tests in the Underwriters Laboratories. The high insurance rates are the result of over-valuation and failure to take into consideration the moral hazard. This virtually puts a premium on the destruction of motor vehicles.

General Motors Stockholders Get Dividends and Booklet Explaining Company's Magnitude

NEW YORK, Aug. 3—The General Motors Corp. is mailing to stockholders with the Aug. 1 dividend checks an educational booklet telling them something of the magnitude of the corporation. Few persons, even among the stockholders, have any definite idea of the wide ramifications of the great enterprise. The table shows sales of passenger cars and commercial vehicles by divisions for the past four calendar years.

The corporation has 78 divisions, subsidiaries and affiliated companies in 35 cities of the United States and Canada.

These plants embrace more than 2000 acres of land upon which there are over 1500 buildings with a floor space of more than 32,000,000 sq. ft. The Buick plant at Flint, which covers 200 acres, is 1½ miles long and ¼ mile wide. The new Cadillac plant at Detroit covers 46 acres. The central office building in Detroit is the largest office building of the kind in the world and contains 1,400,000 sq. ft.

The various divisions have large investments in factory branches, service stations and retail stores in the principal cities of the United States and Canada.

Years Ended Dec. 31	1920	1919	1918	1917
Passenger cars:				
Buick	111,215	115,405	74,856	117,300
Cadillac	19,826	19,801	12,279	19,692
Chevrolet	126,397	127,362	81,435	109,111
Oakland	36,155	51,901	24,110	33,951
Oldsmobile	25,713	33,345	18,822	22,045
Scripps-Booth	8,779	8,128	4,008	2,545
Commercial cars:				
Chevrolet trucks	13,651	6,098	384	2,664
GMC trucks	5,137	7,729	8,997	5,861
Oldsmobile trucks	8,239	7,782	30	15
Totals:				
Passenger cars	328,085	355,942	215,510	306,644
Commercial cars	27,027	21,609	9,411	8,540
Miscellaneous*	36,421	28,607	21,913	11,319
Grand total:				
Cars, trucks, tractors.....	391,533	406,158	246,834	324,503

*Consists of tractors; McLaughlin, Chevrolet and Olds cars produced and sold in Canada, and therefore not included in reports to National Automobile Chamber of Commerce; and also Buick and Cadillac commercial cars.

OFFERS \$1,000 FOR BEST USED CAR SELLING IDEA

Thousands of Schemes Received by Birmingham Dealer Through Mails

BIRMINGHAM, ALA., Aug. 3—The unusual must be utilized in advertising and selling automobiles during the present slumping times, is the opinion of T. B. McCarty, manager of the E. R. Parker Motor Co., who has just instituted a novel contest, offering \$1,000 for an idea that would sell the used cars of his company in a given time.

In a page ad carried in the Sunday papers the plan for giving away \$1,000 was set forth, and since that time has brought hundreds and even thousands of answers. These are, for the most part, of the usual give-away-something, guessing or lucky-number variety, but a real gem was received in the very first mail after the announcement, according to Mr. McCarty.

This suggestion was received from a man who offered to divide the thousand. He suggested that a salesman be hired to sell each car. Each man to be assigned a specific car to sell, but when his car was sold he would have the right to sell any other car unsold. The suggestion was that the man selling the highest number of cars would be given \$300 of the thousand, the second highest \$150 and the third \$50, in addition to the regular commission on the sales.

It was explained that these extra salesmen could be easily gotten because of unemployment. The company's regular salesmen will try to sell the second-hand cars along with the extra men and as an incentive will be paid an additional 10 per cent commission.

Kelley B. Spencer, automobile dealer; S. S. Riddle, automobile editor of the Birmingham *Age-Herald*, and Julian Schwarz, automobile editor, the Birmingham *News*, are to act as judges of the contest. The judges will decide upon which of the plans submitted is the best and the company will immediately put it into effect. If the plan sells the used cars in their entirety by Sept. 1 the company will issue a check for \$1,000 to the winner, according to the conditions.

Injunction Stops Use of Name

TOLEDO, Aug. 1—Willys-Overland Co. has been granted an injunction against the Akron-Overland Tire Co. restraining it from the use of the name Overland in its corporate title or in any use in connection with its product. The order was handed down in the United States Circuit Court of Appeals in Philadelphia.

The injunction is interpreted to give in effect to the creator of a trade name in an industry the sole right to use that trade name in connection with any article which is commonly accepted as an accessory to the product which originally bore the trade name.

FUSSY COUNCILMEN BOTHER GARAGE OWNERS OF CLINTON, IND.

INDIANAPOLIS, Aug. 3—Garage men at Clinton, Ind., are up in arms over a recent ordinance proposed by the City Council affecting the business. It is proposed that no work shall be done on cars parked in the streets, not even such minor repairs as adjusting spark plugs. Councilmen favoring the ordinance say that garages are monopolizing too much of the streets. The ordinance also would fix penalties on spilling oil and throwing waste about the rear of garages.

CONFERENCE DECIDES ON PLAN FOR SUB-DEALERS

SAN FRANCISCO, Aug. 3—A new plan of establishing sub-dealers was announced at the distributors' conference of the United Motors Service of Detroit, held here.

It was decided to appoint registered dealers through authorized distributors; to establish a regularly appointed dealer in all centers of the northern California territory, and to require each dealer and sub-dealer to maintain a representative stock of Delco and Remy electrical parts. The purpose of the new dealer plan is to establish and maintain:

1. More points of contact for the automobile owner, which is to say, more abundant and more convenient service.
2. Greater volume and more facile distribution of service parts.
3. Assurance to both the car dealer and the automobile owner that genuine materials and equipment produced by the manufacturers will be always available at the most convenient points.

WRIGHT TO HAVE DURANT CAR IN PHILADELPHIA

PHILADELPHIA, Aug. 3—George F. Wright, who for the last eight years has been Philadelphia branch manager for the Chevrolet Motor Co., will distribute the new Durant car in Philadelphia and surrounding territory. The present home of the Oakland, which has been closed, will be the new and permanent home of the Durant. This is undoubtedly one of the finest automobile buildings on Broad Street.

New Firm Handles Atterbury

MILWAUKEE, Aug. 1—The Atterbury Motor Truck Co. of Milwaukee, a \$200,000 concern, has been incorporated in Wisconsin to distribute and deal in Atterbury motor trucks. The incorporators are Paul Hartung and Richard A. Bluem, partners in the firm of Bluem & Hartung, who have been Atterbury distributors for several years. The new corporation is a development of this business, which is regarded as forming one of the largest exclusively motor truck dealerships in this part of the country.

NEW WISCONSIN CODE CLASSIFIES ROADS

Important Change Routes Trucks by Size of Loads and Trailers

MILWAUKEE, WIS., Aug. 1—Probably the most important change in the state laws of Wisconsin affecting the use of motor vehicles, known as the state motor code, is a new provision classifying highways according to load of truck and trailer. It was enacted at the biennial session of the legislature, just ended, at the request of the State Highway Commission, which regards it as necessary to protect the system of trunk highways now being built.

The provision is contained in Section 1636-49a, reading in part as follows:

"Commencing Jan. 1, 1922, the highways of Wisconsin, maintained by the state or its counties, insofar as the limitation upon the use of motor vehicles, trailers or semi-trailers, upon said highways is concerned, are divided into the following classes:

"(a) Class A highways shall include those highways upon which may be used any motor vehicle, trailer or semi-trailer weighing with its load not to exceed twelve (12) tons.

"(b) Class B highways shall include those highways upon which may be used any motor vehicle, trailer, or semi-trailer, weighing with its load not to exceed seven (7) tons.

"The class into which any section of highway shall fall shall be determined by the state highway commission, if said section forms a portion of the maintained state trunk highway system; by the county state road and bridge committee, if said section is a highway, not a state trunk highway, maintained by a county."

As soon as the classifications are made the state will issue a map for the guidance of owners and drivers of vehicles. Police officers are authorized to demand drivers to take their vehicles to the nearest public scale in case of doubt as to the weight of the load.

Receiver for Midwest Service

INDIANAPOLIS, IND., Aug. 1—William A. Bond, judge of the Wayne Circuit Court, has granted a petition of the Pythian Building Association for the appointment of a receiver for the Midwest Automobile Service Co. The company occupied a room for its business in the Pythian Building and the petition asserts that rent for the room is in arrears. It also was alleged that the company's liabilities probably are in excess of \$5,000 and that its assets are not sufficient to meet the obligations. Charles W. Jordan was appointed receiver. He provided \$4,000 bond.

CLEVELAND DEALERS SEE BRIGHT FUTURE

No Slackening During July and Prospects Are Good for August

CLEVELAND, Aug. 1—The Barnes Motor Co. delivered in June a total of 296 cars in Cleveland. Up to July 23 it had delivered 215 cars, and F. E. Richardson, sales manager and secretary, says that he will equal the record for June before the month is ended.

"We will deliver an average of 250 cars a month the remainder of the year," said Richardson. "One can only realize what this means by comparing our record in previous years. The best month in the history of the Dodge agency prior to June this year saw but 110 cars delivered. This was considered a great mark, and the boys had been shooting at it for some time."

The Ohio-Buick Co. saw no slackening in sales in the third week of July, according to E. J. Leicht, retail sales-manager.

The Chevrolet agency continued the third week of July at about the same pace that was maintained the preceding two weeks of the month. The Maxwell agency, represented here by the Avenue Motor Co., reported July trade as brisk.

The Hudson-Essex agency, controlled by F. E. Stuyvesant, the Caris-Franklin, the Nash and Templar agencies also report July business this year is above the average for the month in the past.

RAY SHERMAN GETS WATCH AND STAFF'S BEST WISHES

NEW YORK, July 28—The staff of the Class Journal Co. gave a farewell luncheon at the Woodstock to-day to Ray W. Sherman, executive editor, who has resigned to become merchandising director of the Automotive Equipment Association. Sherman was presented with a handsome watch as a mark of esteem.

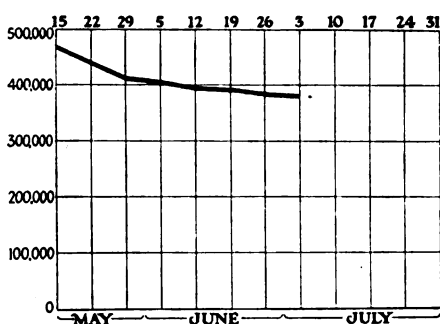
David Beecroft, directing editor of the Class Journal publications, presided. He praised highly the work done by Sherman in building up Motor World, with which he was connected for more than nine years. An address of similar purport was made by H. M. Swetland, president of the United Publishers Corp. and the Class Journal Co.

The presentation of the watch was made by Neal G. Adair, editor of Motor World.

Sherman will leave for Chicago tomorrow with his family to take up his new work immediately.

Deny Quartermaster Auction

INDIANAPOLIS, Aug. 1 — Stories circulated throughout Indiana recently, to the effect that a large quantity of automotive equipment would be sold at auction from the stores of the quartermaster at Ft. Benjamin Harrison, were denied by Capt. Earl Eikenberry.



Idle Freight Car Record

The black line represents the record of idle freight cars throughout the United States. It is a business indicator of interest to all automotive men, and especially to truck dealers. When the railroads are busy carrying merchandise it follows that manufacturers and merchants are busy fulfilling the needs of customers. Between May 15 and July 6 the average net car surplusage has shrunk from 469,770 to 381,839, a decrease of 87,931. During the week of June 19-26 the surplusage was reduced 6,447 and, between June 26 and July 6 the surplusage shrunk 3,811 cars more.

\$975 SELLING PRICE FOR NEW BUICK "FOUR"

FLINT, MICH., Aug. 1—The Buick Motor Co. announces the following prices on the various models of its new four-cylinder car: Touring, \$975; roadster, \$935; coupé, \$1,475; sedan, \$1,650. The engine is of valve-in-head type, has a three bearing crankshaft and cylinder dimension of 3 3/4 x 4 1/4 in. The oiling system is a combination of pressure and splash and the cooling water is circulated by a pump. The Marvel carbureter is standard equipment and it is provided with a new automatic heating system which is interconnected with the throttle so that the amount of heat supplied is dependent on the speed of the engine.

The clutch is of the multiple dry disk type. The front universal is incorporated with the gearset and lubricated from it. Hotchkiss type drive is used and the springs are semi-elliptic all around. The wheelbase is 109 inches. The body is finished in black with a white stripe on the touring model. The shipping weight is 2380 lbs.

RUSH WORK ON VERLINDEN PLANT OF DURANT MOTORS

LANSING, MICH., Aug. 1—Rapid progress on the Verlinden plant of the Durant Motors Corp. is being made. The Christman Construction Co., which has erected four cement towers for work, is now completing the second floor of the main plant and its various units. Steel for structural work on the warehouse and the enameling plant is on the ground, and work on this is starting to-day. The Christman company is beyond schedule on the plant and from present outlook will have no difficulty in turning over the plant to Edward Verlinden on Nov. 1.

CULP ANNOUNCES TIRE DISTRIBUTION PLANS

*Includes Association of Manufacturers and Direct Interest
—Many Are Interested*

NEW YORK, Aug. 1—A new plan of organization and distribution in the tire field is being presented by George K. Culp, Inc., this city, the head of which has been connected with the tire industry in various capacities for nine years.

The plan includes the association of a large number of rubber manufacturing companies and a large number of distributors on such a basis that all concerned will have a direct interest in the enterprise. Mr. Culp states that he is in communication with about forty tire companies and has already practically consummated arrangements with the following:

Combination Rubber Mfg. Co., Bloomfield, N. J., to make Culp cord tires; Semple Rubber Co., Trenton, to make Culp red tubes; Chillicothe Tire and Rubber Co., Chillicothe, Ohio, for Ford size fabrics; Converse Rubber Shoe Co., Malden, Mass.; A. J. Stevens Rubber Co. of Kansas City; C. Kenyon Co., Brooklyn.

The tire stores and distributors which have allied themselves with the proposition include: Bert A. Hosford Co., Denver; City Quick Tire Service Co., Tampa; Marathon Tire & Rubber Co., Milwaukee; H. S. Michael, Baltimore; Murray Tire Service Co., Kansas City; Pace Tire Co., Albany, Ga.; Easton Tire Co., Easton, Pa.

The foreign field, Mr. Culp states, is also expressing an interest in the plan.

**Hey, Mr. Dealer—
Stop Thief**

(Continued from page 16)

operation with the police in tracing stolen cars.

3. Efforts, both individual and collective, to secure the co-operation of newspapers of the vicinity in creating public sentiment in favor of heavy penalties for car theft, both in the editorial and in the advertising pages.

The detective bureau of the Underwriters Conference is at the disposal of dealers and garagemen for the tracing of stolen cars and is eager to co-operate. The underwriters have bureaus in Chicago, Atlanta and New York, to which dealers and garagemen may appeal for assistance in tracing cars, either by phone, telegraph or mail.

With the steady increase in the volume of stolen cars reported, the situation is becoming more serious as viewed from the standpoint of the dealer, as well as the owner, and the time has arrived when cognizance of this serious situation must be taken and plans made to assist in the efforts to curb thievery.

CALIFORNIA DEALERS TO CONVENE THIS MONTH

Forty Organizations Will Gather at Lake Tahoe Aug. 15 to 16

SAN FRANCISCO, CAL., Aug. 3.—Automobile men from every section of northern California will gather at Lake Tahoe, Aug. 15 and 16 for the meeting of the northern division of the California Automobile Trade Association. George Haberfelde, who was re-elected president at the general meeting in Santa Barbara in June, will preside, and will be assisted by Robert W. Martland, secretary-manager of the state association. The state association is divided into 40-odd local associations, each with a secretary-manager in charge and each of which will have from two to five delegates at the meeting.

Present indications are that a full discussion will be had of the "California Plan," of automobile trade associations, now adopted by the men in the automotive industry in eighteen states, while price-reductions and the general trend of business will get their share. Some of the delegates from San Francisco are filled with "reorganization ideas," and these, also, will be threshed out.

Mr. Martland is now on his second trip into the Pacific Northwest, telling the state of Washington, and British Columbia, all about the "California Plan," and how well it has worked out in those sections which have adopted it. This is the second time that he has gone northward in less than a year to help organize this plan in Oregon and Washington. He will return in time for the Lake Tahoe convention.

RECEIVER IS NAMED FOR MONITOR MOTOR CAR CO.

COLUMBUS, Aug. 1.—Upon the application of the J. E. McNally Lumber Co., who held a note against the company, Judge Rogers in the Franklin County Courts has named Ernest W. Pavy receiver for the Monitor Motor Car Co. under a \$50,000 bond. It is claimed that the company has a considerable amount of finished cars, partly finished cars and materials on hand and pressing creditors threaten a dissipation of the assets. The receiver has announced that the assets aggregate \$400,000 and the liabilities \$190,000. Operations at the plant outside of furnishing service have been suspended.

ANTHONY, AWAITING NEW DURANT, LOSES NO TIME

LOS ANGELES, Aug. 1.—One of the surprises in recent years involving a motor car agency was the announcement of the discontinuance of the Reo line by Earle C. Anthony, Inc. The Anthony company had been State distributor for the Reo for many years, but the factory has announced it will install direct factory branches at San Francisco and Los

Angeles and establish a dealer organization throughout the State. Anthony has been appointed distributor for the new Durant, and in this connection is disposing of a number of Scripps-Booth cars. He also has two Sunbeam chassis.

R. C. Durant headed the Scripps-Booth Co. of California, and has withdrawn from affairs of that company. This left the Scripps without representation, and as there are no Durant cars now, Anthony will try to clean up the Scripps stock. The Anthony company has been in business here for sixteen years and although it is not assuring service, the fact that the Scripps is a General Motors product and parts will be available anywhere, means there is considerable inducement being offered, because of the price cut.

MICHIGAN LEGISLATURE TURNS DOWN SAFETY PLEA

LANSING, MICH., Aug. 2.—The Michigan Legislature in extraordinary session has nullified the efforts of the Detroit Automobile Club and affiliated clubs to have the State highways made safer for night driving. Senate enrolled Act 117 was rescinded. The old law was re-enacted to take its place.

The action of the Legislature followed the claim by certain members that the new law would make it necessary for every owner of a motor vehicle in Michigan to buy some kind of patented lenses. They claimed that this would run into big money, perhaps several millions of dollars.

Despite the fact there is no provision that such lenses be bought, the members of the Legislature overlooked the fact that the law was drafted for the purpose of saving human life, many persons being killed in accidents caused by motorists using blinding headlights on country roads.

Milwaukee Business Gains

MILWAUKEE, WIS., Aug. 1.—In casting up accounts for July, Milwaukee dealers generally find that their business volume for the past month is anywhere from 5 to 20 per cent in excess of June trade, and in excess of the volume of July, 1920. A few dealers fell behind the previous month and the corresponding period last year, but the majority are able to report gains of a more or less substantial nature. In dollars and cents, the July business this year fell behind last year, which is nothing more than natural in view of the marked reductions which have been effected in selling prices within the year. Prospects for August are regarded as favorable, especially with the stimulus in the foreground furnished by the annual fall show in connection with the Wisconsin State Fair, Aug. 29 to Sept. 3. This is primarily a distributors' advantage but retail sales also are materially improved at the same time.

Hanson Makes New Cuts

ATLANTA, GA., Aug. 1.—The Hanson Motor Co. announces final 1921 price reductions on all its models, effective at

U. S. SURVEY SHOWS RISE IN AUTOMOTIVE SALES

Federal Reserve Board, However, Says Increased Business Is Subsiding

WASHINGTON, Aug. 3.—Reports of special agents of the Federal Reserve Board on general business and financial conditions during the month of July, as compiled here, show that there has been some revival of sales in automobiles as a consequence of price reduction, but that the increased business is now subsiding. The Reserve Board agents found greater economy in purchasing by consumers as evidenced by relatively better demands for lower priced cars and used cars of all types, as well as by the exceptionally good demand for accessories and parts.

According to the Federal Reserve Board report, manufacturers in general are keeping production close to existing demands in order to prevent accumulation of cars. As to general business and financial conditions, the Board points out that the seasonal dullness in practically all lines of trade has prevented general business conditions from showing a material alteration during the month of July. Consumers' demand, as reflected in the volume of retail trade, continues as good as or better than at this time last year. Probably the most hopeful feature in the outlook is the continued prospect of excellent good crop returns. The desire to see a resumption of full production has become very acute in not a few districts and has apparently led to some operation of plants on a non-profit making basis but with wage scales correspondingly reduced or employees working on part time.

In the financial field money rates have become distinctly easier. A reduction in the rediscount rates at several Federal Reserve Banks has placed the charge for all classes of paper at 5½ per cent, while some softening of rates to direct borrowers of banks has been reported from the financial centers.

It is significant to note that the Federal Reserve Board finds that unless there is a marked revival in our foreign trade in the remaining months of the present calendar year, the calendar year 1921 will show a far greater falling off from 1920 than is indicated by existing figures. There is, however, a decrease of less than 1 per cent in the commodity balance of trade. Coincident with the decline in foreign trade, there has been a falling off in the proportion of our commerce transported in American vessels and a corresponding increase in the proportion carried in foreign bottoms.

once. Prices are f.o.b. Atlanta. Total reductions since Jan. 1 average \$600. The latest cut brings the roadster and five-passenger touring car from \$2185 to \$1795; the five-passenger sport model and the seven-passenger touring car from \$2285 to \$1895; the sedan from \$3165 to \$2885 and the coupe to \$2775.

TROLLEY COMPANY TO OPERATE BUSES

Expected New England Railways Will Make Purchase in Wholesale Lots

NEW LONDON, CONN., Aug. 1—Verification by President L. S. Storrs at a hearing before the Public Utilities Commission in Waterbury, of long-standing rumors that the Connecticut company, which has a near monopoly of trolley franchises within the State, plans to meet jitney competition through the operation of motor buses, 10-cent fares with transfer privileges, is causing considerable concern to automotive interests throughout the State, with the outcome being closely watched. Such jitney service, it was stated by President Storrs, would be on streets and in territory which have no trolley service, or where service is in danger of abandonment because of non-payment of operating expenses. Should such service be inaugurated in Waterbury and vicinity, and prove a success, automotive interests believe it will be extended to State-wide adoption. That it will cripple or seriously curtail privately-owned jitney competition is the belief of automotive interests, and by so doing, hit them a serious financial blow.

It is pointed out that prosperity and development of the individual and privately-controlled jitney service has meant much to the prosperity of numerous automotive interests. Dealers in cars have had a heavy demand of ten times under time-payment agreements. Dealers in accessories, garages and repair shops have all received their share of the business increase. Wherever jitneys have been legislated out of business or rigidly curbed, automotive men say, there has been a substantial loss in business reported by dealers, garage-men and repair shops.

If the traction interests go into operation of motor buses on a large scale, it is pointed out, it will undoubtedly mean cars will be bought directly from the manufacturers in wholesale lots.

VANDERWELL TAKES OVER WILLARD PATENT RIGHTS

CLEVELAND, Aug. 3—C. A. Vanderwell & Co., Ltd., of London, has acquired the patent rights covering the manufacture of the Willard threaded rubber insulated battery for the United Kingdom and British dominions, excepting Canada, according to an announcement made to-day at the office of the Willard Storage Battery Co. The threaded rubber takes the place of the wooden fiber separators in the battery and makes the battery much more lasting.

The device is the invention of Willard and it has been used in this country for more than a year with good results.

Receive Big Ford Order

SPRINGFIELD, OHIO, Aug. 2—Ford Motor Co. has placed an order with the Victor Rubber Co. for 200,000 rubber mats for delivery during the remainder of the year. According to announcement made to-night by President H. S. Berlin of the Victor Rubber Co., formerly of Akron, this order is in addition to one for 250,000 mats received from the Ford company early in the year.

Wainwright Running on High

CONNERSVILLE, IND., Aug. 1—The Wainwright Engineering Corp. is running its plant at full capacity on the day shift and 50 per cent at night, turning out 3600 pistons a day, chiefly for the jobbing trade.

John D. Carmody, for the past seven years district manager for the Champion Spark Plug Co. has been appointed Pacific Coast manager for the Wainwright company, with headquarters at San Francisco.

RAPID RISE IN SALES ALONG PACIFIC COAST

Summary Shows More Buyers Than Any Period in Last 18 Months

SAN FRANCISCO, Aug. 2—The barometer of trade in all branches of the automotive industry is rising steadily in California; the southern part of the State is busier in these lines than the north, but the north shows steady gain, with every prospect of improvement. It is still a buyers' market, and the buyers are more carefully critical than ever, but more people are buying cars than have been buying them for the past eighteen months. In other words, the market for the right car, at the right price, never was better in the territory for which San Francisco is the center of distribution for automotive vehicles and equipment.

Chances Never Better

This is a brief summary of conditions as voiced to the correspondent of Motor World by a large number of dealers in San Francisco and in Oakland and Berkeley, on the eastern shore of San Francisco Bay. General reductions in the prices of virtually all cars is held to be responsible for the improved trading, but greater freedom of money and better prospects also are indicated by the increased demands for used cars, on which prices are virtually the same as they have been for the past six or eight months. In no other industry on the Pacific Coast is the tendency to get back to a wholesome pre-war basis in the matter of movement of goods, merchandising prices and desire to buy, more marked than in the automotive industry. The demand is for the best possible car at the right price, and the reduction in prices by the factories, without reduction in quality of car delivered, has been a mighty factor in bringing about the improved condition.

The passing of the so-called "price-flurry" seems to have stabilized the business of buying, selling and distributing automobiles to greater degree than any one factor since the dealers came to realize that the time for hustle-for-orders rather than sit-down-and-wait-for-buyers had arrived. Robert W. Martland, secretary-manager of the California Automobile Trade Association, which consists of 3000 members throughout the State, organized to give a motoring public a "square deal" in the matter of automobile repairs and sales, said:

Coast Business Best

"Business in the automobile trade in California is in better condition now than in any other part of the United States. I have just made a complete tour of California and have talked with hundreds of men who have made trips East looking over business conditions. Manufacturers and distributors throughout the country are looking to California to absorb the larger part of the automotive production and equipment this year.

This Ford Top Used as Boat



The top of this special touring body is detachable and may be used as a boat. It is 12 in. deep and has two seats which, in its capacity as a top, form shelves. A small engine of the detachable type is attached to the stern to supply the motive power. It is the work of J. A. Cowan of Kansas City, Mo., and it is his intention to build it for all makes of cars

EDDIE RICKENBACKER TURNS MANUFACTURER

**American Flying Ace Backed in
\$5,000,000 Organization
—No Details Yet**

DETROIT, Aug. 2—Backed by Walter Flanders and B. F. Everit, Capt. E. V. Rickenbacker, America's ace of aces, is about to enter the ranks of American motor car manufacturers. Application was filed at Lansing yesterday for a charter for the Rickenbacker Motor Co., a \$5,000,000 concern, backed by a group of automobile men, which is of unusual strength and resource.

This is not the first time that Flanders and Everit have been associated, as they were two members of the old E. M. F. group which later became the Studebaker Corp. The other name was that of William E. Metzger, who was the "M" in the combination. This organization looms large in the history of automobile manufacturing activity as one of the first to manufacture a low priced car in large quantities.

Name Is Familiar

Since the sale of the E. M. F. concern to Wall Street interests, Everit has confined his attention entirely to his original business of automobile body building and he is to-day the second largest body builder in the world.

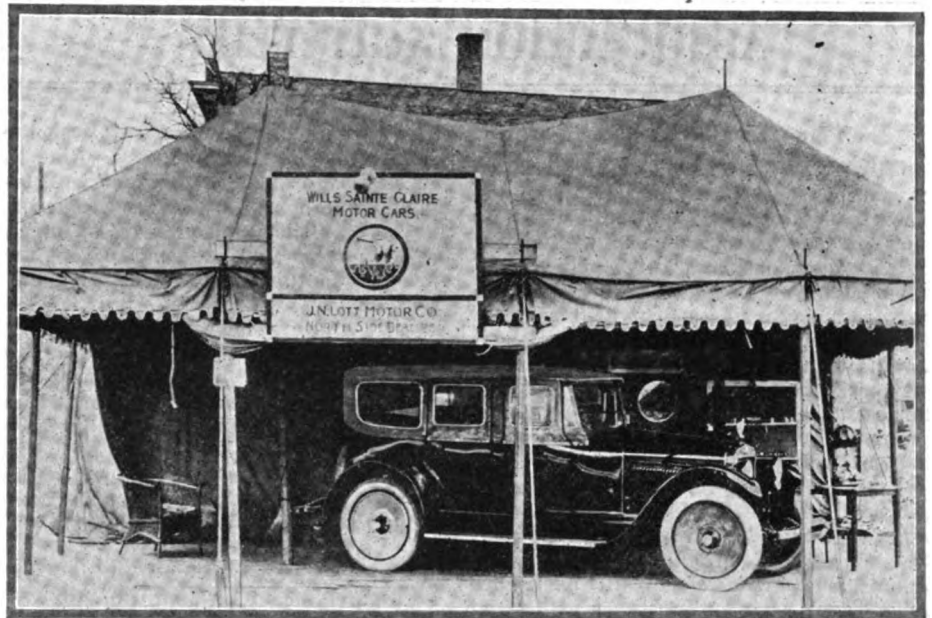
The name of Flanders is familiar to everyone in the automotive industry. He took over the defunct United Motors Co. from which he created the Maxwell Motor Co. of which he was head from 1911 to 1920. During that time this organization earned \$18,000,000 in profits, having started from what was known as a pile of scrap. Flanders has continued to insist up to this time that he was going to remain in retirement and, in fact, made this announcement in Detroit not more than ten days ago. Those well informed in the industry always have believed, however, that Flanders would come back.

Rickenbacker stated that the design of his car was started over two years ago when he returned from Europe determined to enter the automobile manufacturing business. He states that the design incorporates many points learned during his racing and aviation experience and is combined with sound manufacturing points learned through his own long experience in the automobile field, and that of his associates.

Everit Is President

As it now stands, the organization includes Everit as president and general manager, Rickenbacker as vice-president and sales director; Harry L. Cunningham as secretary and treasurer. The other directors are Flanders, Carl Tuchenor, Roy Hood and E. R. Evans.

Cunningham is one of the closest men in the automobile industry and has been associated with Everit and Flanders practically since the beginning of the business. Cunningham helped Alexander Winton build his first car and was chief



Couldn't Rent a Building So He Bought a Tent

J. N. Loot, who handles the Wills Sainte Claire on the North Side of Chicago believed that the neighborhood in which he decided to show his cars was the best possible one, in view of the number of prospects. Not being able to hire a show room in the particular neighborhood in which he desired to display the Wills Sainte Claire, which he handles in that territory, Loot put up the attractive tent illustrated herewith and furnished it in true summer style with wicker furniture and an attractive lighting system. The tent show room is at Sheridan Road and Berwyn Avenue. It is opposite Edgewater Beach Hotel and in the heart of the exclusive residential section of Chicago. Incidentally, Loot's sales record is one of the best made by any of the Wills Sainte Clair dealers to date.

assistant to Henry Ford when he built the old "999." He had been Ford branch manager in Detroit and continued as consulting engineer until the E. M. F. organization was started, when he joined this group. His last position was that of sales engineer in charge of production in the Maxwell-Chalmers Co. Since Flanders left Maxwell-Chalmers, Cunningham has been devoting his entire attention to perfecting the Rickenbacker car.

Hood has had a similar history. He has been noted as a purchasing agent in the automobile field and started as assistant purchasing agent of the E. M. F. group. He later held the same position with the Studebaker Corp. and then became purchasing agent of the Maxwell-Chalmers; his position in the new concern will be that of purchasing agent.

Tuchener is known as a production man and during the war played a large part in Liberty motor production. During the last two years he has been production manager of the Pierce-Arrow Motor Car Co. at Buffalo.

Rickenbacker has stated that he cannot give details of the car at present, but that it will be a popular priced large production model.

Heat Stimulates Business

COLUMBUS, July 18—The Columbus Auto Trade Association at a recent meeting adopted a number of changes in its constitution and by-laws. The changes were made to aid in carrying out the purposes of the organization. Manager J. T. Miller announced that the warm weather has helped business.

WINNIPEG EQUIPMENT SHOW NEXT FEBRUARY

**U. S. and European Exhibitors
Will Be Represented at
Canadian Event**

WINNIPEG, Aug. 2—The second annual automotive equipment show, staged by the Western Canada Automotive Equipment Association, will take place Feb. 6 to 11 (both dates inclusive), 1922.

During these dates the annual Bonspiel is held in Winnipeg and attracts thousands of visitors to the city from all parts of Manitoba, Saskatchewan and Alberta.

Only Equipment Show

The Winnipeg show is the only exclusive automotive equipment exhibition staged in Canada, and the success met with last year convinced the manufacturers and jobbers of Canada that an early start for 1922 would result in the putting on of a far bigger and better show than even the one held in 1921. The auditorium of the Board of Trade Building has been secured for the above stated dates.

Inquiries are coming to the association from manufacturers in England, and indications are that a number of overseas exhibitors will be represented. United States manufacturers without doubt will exhibit even more extensively than at the show last year. Many Eastern Canadian companies have already stated they will be represented.

ASSOCIATION ACTIVITIES

Plan for Hoosier Show

INDIANAPOLIS, Aug. 3.—Letters have been sent out by L. M. Shaw, of this city, secretary of the Indiana Automobile Trade Association, to the directors of the organization asking their views about a convention to be held in November of this year instead of next spring. In case the official board believes it advisable to hold the convention this year, steps will be taken immediately for the largest meeting of automobile dealers, garagemen and accessory dealers ever held in Indiana.

Tentative steps have been taken to secure a suitable building for the meeting. Mr. Shaw estimates that in case the convention is held this fall more than 1000 persons from all parts of Indiana will attend. The space will have to be sufficiently large to accommodate the exhibits, Mr. Shaw said. It is the plan to have exhibits that will show the garageman new tools for his business, the accessory man the latest devices, the car dealer new material for his service department, and Mr. Shaw states that special efforts will be made to secure men in charge of the displays who will have the ability to not only display the wares, but in addition give the trade of the State ideas on how tools and accessories should be properly used and sold.

In the event the convention is held at this time, a meeting of the board will be called as quickly as possible to make the necessary arrangements, and by means of a district organization, Mr. Shaw will launch a campaign for a record attendance. The State has been divided for the purpose into the thirteen congressional districts, and it is planned to have a meeting in each district before the time for the convention. Immediately after the convention the State organization will launch out into an active membership drive.

Cash Method for Utica

UTICA, N. Y., Aug. 3.—The Utica Motor Dealers Association issued notice through advertisements in the Utica newspapers as well as through the posting of notices in their garages, that service and parts in Utica garages will be sold only on a strict cash basis.

The "cash method" is to be used in the 28 service stations of the dealers affiliated with the Utica Motor Dealers Association, and the only exceptions will be in the case of work done for the city, county or state. In the case of commercial vehicles, exceptions will be made for large manufacturing plants who will send a purchase order covering the work to be done.

Salesmen Organize

ATLANTA, GA., Aug. 3.—An idea that may be generally adopted in the larger

cities throughout the Southeast was the organization at Montgomery, Ala., a few days ago of the Montgomery Automobile Salesmen's Association. The organization, which includes in its membership only retail salesmen of the various Montgomery dealers and distributors, adopted as its slogan "More Sales." Officers have not as yet been elected. Meetings of the association will be held each week, at which time plans and ideas will be exchanged, and there will be general discussions having to do with automobile salesmanship. The Montgomery association sets forth as its purpose "a banner six months in automobile sales for the closing half of 1921."

Plan Police "Accident Bureau"

PHILADELPHIA, Aug. 1.—Plans for the establishment of a new police division, to be known as the "Vehicular Accident Bureau," for the curbing of reckless operation of all kinds of motor vehicles, which has become intolerable in this city, were outlined by Superintendent of Police William B. Mills, at a luncheon given at its quarters, Broad and Callowhill streets, by the Philadelphia Automobile Trade Association. In outlining the plan, Mills said the bureau would seek to accomplish the following:

Stop "joy rides" and speeding, as boxes will be placed on corners of residential sections, containing printed cards which the public will be asked to fill out with license number of offending cars and names of witnesses.

Eliminate political pull when offenders are arrested.

Appeal to the State Highway Commissioner for revocation of licenses of drivers who habitually break traffic laws and disregard pedestrians' rights.

Simplify traffic negotiations, regulate speed and break up idea of that type of driver who thinks because he is insured he has rights exceeding those of pedestrians.

Fix responsibility and cause for every automobile accident in the city; keep an accurate record of drivers figuring therein and make three accidents ground for application to revoke license of offender.

The co-operation of all motor clubs will be sought. It is expected they will launch an educational campaign among their members. The police will thoroughly investigate every minor accident, according to Mills, and urge the designation of special streets for truck traffic. It is planned to persuade the city council to increase the punishment for parking and to make the fines cumulative.

Urges Flat Repair Rate

MEMPHIS, TENN., July 30.—Steve H. Butler, president of the Memphis Automobile Dealers Association, has suggested that a flat rate for repair service be charged by all members.

NEW HOME FOR LARGEST FORD STATION IN U. S.

SAN FRANCISCO, Aug. 3.—The William L. Hughson Co. has just moved into its new three-story building. Especially arranged for solving the service problems of owners of Fords and of Federal trucks, the building also affords excellent showrooms and is equipped for the most modern of merchandising methods. A total floor space of 133,000 square feet is provided, through utilization of both roof and basement, and the cost is estimated at approximately half a million dollars.

The new Hughson home houses the largest Ford sales plant and service station in the United States, 103,000 sq. ft. being devoted to this purpose. Hughson is one of the oldest Ford dealers in the country, having sold these cars since 1903. Built-in efficiency features, intercommunicating systems, elevators, etc., are found throughout the building. The showrooms of Fords and Federal trucks are completely separated, and each is under the management of an independent departmental head. The parts and service stations are on separate floors, and the entire basement is devoted to a day-and-night garage where Ford service is given at all hours. Two public gas stations are open.

LARRABEE-DEYO ADDS A NEW MODEL TO LINE

BINGHAMTON, N. Y., July 30.—A 1-ton, six-speed model is the latest addition to the line of trucks made by the Larrabee-Deyo Motor Truck Co., this city. With this new model the line now consists of 1½, 2½, 3½ and 5-ton sizes.

This new model is at present being tested out on the road. It has a speed of 55 m.p.h. with 2450 lbs. of dead weight. In a test recently made the truck was driven from 2 m.p.h. to 30 m.p.h. within 50 ft.

Specifications include the following units: Continental 7-R engine; Brown-Lipe clutch and gearset; Gemmer steering gear; Fedder radiator; and Spicer universal joints in the rear and Thermoid in the front. Other equipment includes metal disk wheels; steel cowl, seat riser and back, with fore doors, all integral.

The wheelbase is 138 in., allowing for 9 ft. of loading space back of the driver's seat. This job complete, with electric lights, starter, cab, windshield and express body will list for approximately \$2,000. Tire equipment includes 34 by 5-in. cords.

Hoosier Insurance Rates

INDIANAPOLIS, IND., Aug. 3.—The Indiana Inspection Bureau has filed with the Indiana insurance department rates supplemental to schedule of insurance premiums now being charged by standard line insurance companies for risks in Indiana. Supplemental rates have most to do with 1920 models of automobiles.

CHANGES IN THE TRADE

Gallagher Bros. of Chester, Pa., have been appointed Packard dealers for Chester, Media, Lansdowne and vicinity by the Packard Motor Car Co. of Philadelphia.

Charles N. Monzies has been appointed manager of the Pacific Coast branch of the Indiana Motor Truck Co. at San Francisco. C. B. Warren will be general representative.

E. L. Ford has been appointed sales manager for the Fisk-Norton Co., distributors for the Stephens "Salient Six" in the Pittsburgh district. Ford comes from Birmingham.

James H. De Laune and A. H. Jelks, the latter succeeding W. Legnon, formerly secretary and treasurer, are conducting the re-organized Peters Motor Repair Co. of New Orleans, La.

C. H. Landsittel has resigned as a director and general manager of the Paragon Motor Car Co. to become sales engineer of the Climax Motor Service of Chagrin Falls, Ohio, a suburb of Cleveland.

National Motor Accessories Corp., New York, has undertaken the formation of a chain store organization to distribute accessories, including a number of branded lines bearing the name "Naco."

Frank H. Gloyd of Tacoma, Wash., senior in the local high school, has been declared state winner of the Harvey S. Firestone scholarship prize for his essay on "Good Roads and Highway Transportation."

George S. Biles, battery engineer of Philadelphia, has been appointed sales engineer for the Ray Battery Sales Corporation, distributor of the Ray battery for eastern Pennsylvania, New Jersey, Delaware and Maryland.

Sterling H. Keene, service manager of the National Motor Car & Vehicle Corp., has been granted a leave of absence to enter the U. S. Public Health Service Hospital No. 60, at Oteen, N. C., so that he may completely recover from the effects of being gassed during military service in France.

A. J. R. Seyfert, formerly of the Osmond Motor Car Co. and the Van Etta Motor Sales Co., Milwaukee distributors and dealers, has joined the Auttac Co. as director of sales. The Auttac line consists of the Hayes shock absorber, the H & H tonneau shield, visor and wings, and the Coffield tire protector.

Ginsberg Motor Co., Montreal, has been appointed their sales representative for all of eastern Canada for the Rolls-Royce, and by the end of the month will have the latest English model on exhibition at their salesroom. The Ginsberg Motor Co. will be represented in all of the principal cities of eastern Canada, and has obtained allotted dates for a number of early deliveries.

R. F. Nicholas of Indianapolis has leased at Kokomo, Ind., temporary location for a Gibson-Overland and Willys-Knight sales and service station. Nicholas has been with the Overland agency and will take with him to Kokomo Henry Harris, who has been with the agency for six years. In addition to the sales and service department the company will handle spare parts and equipment.

J. T. Madden has left the Southern Oakland Co. and has joined the Southern Nash Motor Co., distributor of Nash cars and trucks, also Lafayette cars. For five years he has been identified with the Southern Oakland company, first as traveler in the Carolinas, then manager of the Charlotte

branch, and for the past three years general sales manager for the entire southeast.

Truman Berry, millionaire mine operator of Whittier, Cal., becomes distributor of Leach Power-Plus Six in Orange County, California, and a number of cities in the surrounding territory. New salesrooms will be opened at Pomona, Whittier and Anaheim, and the present one at Santa Ana will be retained. H. H. Humphries, former distributor, will handle securities in the same territory.

George H. Williams, president and general manager of the Geo. H. Williams Co., Milwaukee, distributor of the Franklin in eastern Wisconsin and retail dealer in Milwaukee County, has been awarded the first division prize of \$1,000 by the Franklin company for leading all individual salesmen in the United States in the sale of new cars in June. He scored 525 points by making 19 retail sales and deliveries personally. J. M. McGuinness of Boston ranked second with 425 points. Williams also won first place in the northwestern division, embracing nine states and three Canadian provinces. This award also was earned by Williams in April and May.

NEW ORLEANS SEEKS PLAN TO DISPOSE OF USED CARS

NEW ORLEANS, Aug. 2.—Automobile dealers of New Orleans are still seeking a solution of the used-car situation. The committee of the dealers association appointed about a month ago has not yet made any definite recommendations, although the secretary is busy compiling data from the various dealers, showing the makes, styles, models, etc., of the used cars on hand.

When this data is completed it is expected the committee will agree upon some definite plan to be submitted to the association. Meanwhile, a number of dealers have been conducting special sales of used cars offering novel inducements to prospective buyers, such as offering to supply an expert driver until the buyer becomes proficient in driving.

Another sale was conducted upon an open city lot near the business center by a gentleman reported to be a professional salesman of this character. Cars were contributed by a number of dealers and the sale was conducted for several days during the latter part of July.

177 Retailers in Milwaukee

MILWAUKEE, WIS., Aug. 1.—There are 177 retail dealers in motor cars in the city of Milwaukee it is revealed by a census which has been completed by the commercial service department of the Milwaukee Journal. The number includes all legitimate retail representatives of manufacturers and distributors of passenger cars and motor trucks. This is the first census of retail merchants in Milwaukee ever taken and in most instances even well posted dealers and officers of retail merchants' organizations have been surprised by the report's figures.

EXPECT 20% INCREASE IN INDIANA BUSINESS

Indianapolis Dealers Say July Sales Will Beat Those of June

INDIANAPOLIS, Aug. 2.—It is expected that retail sales for the first half of July will beat sales for the same period of June by from 10 to 20 per cent. Those dealers handling cars on which reductions were made last month or during the last six weeks are reporting an exceptional business which will show a dollars and cents increase in spite of reductions. Dealers in the higher priced cars say business is showing better so far this month than it has during the year and these dealers are rather confident concerning business during the remainder of the year. It is probable that Studebaker and Haynes cars are leading the field in their class, while the dealers in Dodge, Ford and Chevrolet all report increased sales during the month. One reason for the increased sales dealers say is the fact that money is loosening up a little, though credits are yet very much restricted. Business in used cars also is showing a decided increase and dealers say that if the industrial situation continues to improve it is probable that further increases in used car sales will be recorded.

PORTLAND DEALERS WILL HAVE LARGER QUARTERS

PORTLAND, ORE., Aug. 1.—The demand for larger quarters on the part of established Portland automobile concerns shows a healthy condition of business. A lease involving the payment of rentals in the aggregate of \$30,000 was taken by the Automotive Sales Co. of the two-story building for a period of five years. The building covers a ground space of 50 x 100 feet, which will be occupied by the salesrooms of the company.

The Atterbury Sales Co. has leased the corner of Sixth and Everett for use as a salesroom. This is a five-year lease and involves rentals aggregating \$15,000.

The Spreckels Tire Corp. will establish a factory branch at 102 North Broadway. The Hassler Shock Absorber is now located at 92 North Broadway under a long lease.

The Universal Car Exchange Co. has leased 108 North Broadway, the west side branch of this company.

May Modify Ford Offer

WASHINGTON, Aug. 1.—Secretary of War Weeks says that Henry Ford's offer for the Government nitrate plant at Muscle Shoals, Ala., is unsatisfactory in its present form. He said that in several respects the Ford proposal was not in the exact form expected, though he thought it likely that modification could be made in the offer when he discussed the proposal with Ford, which might make it acceptable. The date has been set for a conference between the two.

COMING EVENTS

SHOWS

Denver	Aug. 10-12	Midsummer Exhibition of Cars, Trucks and Camping Equipment, Civic Center, under auspices of the Denver Automobile Dealers Association.
Toronto, Can.	Aug. 27	Canadian National Automobile Show.
Indianapolis	Sept. 5-10	Automobile and Accessory Show in conjunction with Indiana State Fair, conducted by Indianapolis Automotive Trade Ass'n, John B. Orman, Mgr.
Ottawa, Ont.	Sept. 9 to 17	Ottawa Motor Show.
Cincinnati	Oct. 1-8	Fall Automobile Show, Cincinnati Automotive Dealers' Ass'n, Music Hall.
Pittsburgh	Oct. 15-22	Fall Show under auspices of Automotive Association.
New York	Nov. 27-Dec. 3	Automobile Salon, Hotel Commodore.
Chicago	January	Automobile Salon, Drake Hotel.
New York	Jan. 7-13	National Automobile Show, under auspices of National Automobile Chamber of Commerce, Madison Square Garden.
Chicago	Jan. 28-Feb. 3, 1922	National Automobile Show, under auspices of National Automobile Chamber of Commerce, Coliseum.
Winnipeg	Feb. 6-11, 1922	Automobile Equipment Show, Western Canada Automotive Association.
Santiago, Cuba	March, 1922	Annual Automobile Show.
Rio de Janeiro, Brazil	Sept., 1922	Automotive Exhibition in connection with Brazilian Centenary.

RACES

Uniontown, Pa.	Labor Day	Autumn Classic.
Los Angeles	Nov. 24	Speedway Events.

CONVENTIONS

Chicago	Oct. 12-14	National Implement & Vehicle Association Convention, Congress Hotel.
Chicago	Nov. 14-19	Annual Meeting and Business Exhibit of Automotive Equipment Association.
New York City	Nov. 22-24	Semi-Annual Convention of Factory Service Managers, N. A. C. C., H. R. Cobleigh, Secretary.

The New Car and Truck Description Index

Giving the date and page number on which they appeared

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Pierce-Arrow	Nov. 24, 1920-32
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Scripps-Booth Six	July 13, 1921-32
Sheridan Eight	Oct. 6, 1920-32
Simplicity Six	Aug. 4, 1920-40
Stanwood Six	Sept. 15, 1920-31
Sterling Knight	Feb. 2, 1921-11
Stevens-Duryea	Dec. 1, 1920-30
Wills-Sainte Claire	Mar. 16, 1921-28
Wills Sainte Claire Roadster	July 20, 1921-33

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Akron Multitruck (1 ton)	Feb. 9, 1921-32
Aries (5 ton)	Jan. 12, 1921-49
Armleder (1 ton)	Nov. 10, 1920-37
Available (1½ ton)	Aug. 4, 1920-32

DEMAND FOR ENDURANCE RACES STRONG ON COAST

SAN FRANCISCO, CAL., Aug. 2—Public demand, met more than half way by the desire of the manufacturer and the distributor, seems to be bringing back the old-time demonstration and endurance races, designed to show exactly what each car will do. The object of these races, of course, is twofold, first to bring home to the public mind the performing ability of the automobile, especially the stock car, and, second, stimulate improve-

ments in construction and mechanical design. On the Pacific Coast there also is manifest an appreciable revival in interest in racing and large crowds greeted the finishes of the races at Tacoma, Seattle and Reno this year.

A Correction

The Manhattan Electrical Supply Co. was listed as a jobber by mistake in the list of the members of the Automotive Equipment Association registered at the Mackinac Island convention. This company is a manufacturer.

EX-ILLINOIS GOVERNOR TO ADDRESS BUTTE MEN

BUTTE, MONT., Aug. 3—Frank O. Lowden, former Governor of Illinois, will address members of the executive board of the newly organized Montana Automobile Association at its first special meeting called for Aug. 6 in Helena.

Other speakers at the meeting will be Governor Joseph Dixon, Lieutenant Governor Story, members of the State Highway Commission and other leading citizens of the State interested in the good roads movement.

Specifications of Current Passenger Car Models

NAME AND MODEL	Engine Make	Cylinders: Bore and Stroke	WB	Tires	2-Pass.	5-Pass.	7-Pass.	Coupe	Sedan	NAME AND MODEL	Engine Make	Cylinders: Bore and Stroke	WB	Tires	2-Pass.	5-Pass.	7-Pass.	Coupe	Sedan
Ace.....G	Guy	6-31x45	123	32x4	\$2975	\$2975	.....	\$3680	\$3680	Maibohm.....B	Falls	6-31x45	116	32x4	11575	11575	11750	\$2395	\$2395
Ace.....H	H-S	6-31x45	123	32x4	2975	2975	.....	3680	3680	Marmen.....34	Own	6-31x45	136	32x4	4185	13985	3985	4875	5275
Ace.....L	H-S	4-31x45	116	32x4	2260	2260	.....	.....	.....	Maxwell.....25	Own	4-31x45	109	30x3 1/2	845	845	1445	1545	
Allen.....Series 43	Own	4-31x45	110	32x4	11385	1385	.....	2195	.....	McFarlan.....1921	Own	6-41x46	140	33x5	6300	76300	6300	7500	7500
Ambassador.....R	Cont.	6-31x45 1/2	136	33x5	14500	\$4500	.....	6500	.....	Merced.....Series 5	Own	4-31x46 1/2	132	32x4 1/2	4500	4500	*4500	5700	6200
American.....C	H-S	6-31x45	127	32x4	2195	12350	.....	3150	.....	Merit.....Cont.	Cont.	6-31x45 1/2	119	33x4	2245	2245	.....	.....	.....
Anderson.....Series 40	Cont.	6-31x45 1/2	120	32x4	2195	1795	1845	2795	2795	Metz.....R & R	Dues.	4-41x46	120	32x4 1/2	5500	5500	.....	.....	.....
Apperson.....S-21	Own	8-31x45	130	34x4 1/2	.....	3000	3250	4500	4500	Mets.....1921	Own	6-31x45	120	32x4	1995	1995	.....	2795	2895
Apperson.....Anniversary	Own	8-31x45	130	34x4 1/2	.....	3600	3750	.....	.....	Mitchell.....F-40	Own	6-31x45	120	33x4	11490	1490	.....	2590	2690
Auburn.....6-30	Cont.	6-31x45 1/2	120	32x4	.....	1695	1695	2795	2795	Mitchell.....F-42	Own	6-31x45	127	33x4	.....	.....	1795	.....	.....
Beggs.....28T	Cont.	6-31x45 1/2	120	33x4	1775	1775	.....	2675	2775	Moller.....A	Own	4-21x44	100	27x3 1/2	2000	.....	.....	.....	.....
Bell.....4-32	H-S	4-31x45	114	31x4	.....	1495	.....	.....	.....	Monroe.....S-9 & 10	Own	4-31x45 1/2	115	32x3 1/2	1295	1295	.....	.....	.....
Bell.....6-50	H-S	6-31x45	124	32x4	.....	1695	.....	.....	.....	Monroe.....S-11 & 12	Own	4-31x45 1/2	115	33x4	.....	.....	2075	2175	
Biddle.....81	Buda	4-31x45 1/2	121	32x4	3475	3475	.....	3975	.....	Monroe.....6-48	Cont.	6-31x45 1/2	122	32x4	2085	1985	2485	2985	2985
Birch Super-Four	H-S	4-31x45	117	31x4	1345	1345	11395	2295	2295	Murray-Mac Six	Own	6-31x45 1/2	128	34x4 1/2	4250	4250	4250	.....	.....
Birch Light Four	LeR	4-31x45 1/2	108	30x3 1/2	1195	1195	.....	.....	.....	Nash.....681-7	Own	6-31x45	121	33x4	1525	1545	11695	2395	2695
Birch Light Six	H-S	6-31x45	117	32x4	1595	1595	.....	.....	.....	Nash.....682	Own	6-31x45	127	34x4 1/2	.....	1695	.....	.....	.....
Bomb-Davis.....21S	Cont.	6-31x45 1/2	126	32x4 1/2	12385	12385	2385	.....	.....	Nash Four.....41-4	Own	4-31x45	112	32x3 1/2	1175	1195	1785	1935	1935
Bowler.....91	Own	4-4 x 5 1/2	125	32x4 1/2	17000	7000	.....	10500	.....	National Sentinel.....BB	Own	6-31x45 1/2	130	32x4 1/2	2990	12990	2990	3990	3990
Brace.....4-34	Own	4-31x45	109	31x4	1085	1085	.....	1685	1685	Nelson.....D	Own	4-31x45 1/2	104	32x4	.....	1900	.....	.....	.....
Brook.....S-21 A	Own	2-31x45 1/2	90	28x3	395	.....	.....	.....	.....	Noma.....1C	Own	0-31x45 1/2	128	32x4 1/2	3000	13200	.....	4450	.....
Buick.....1922-44-5-6-7	Own	6-31x45 1/2	118	33x4 1/2	1495	1525	.....	2135	2435	Northway.....Lyc	Own	6-31x45 1/2	128	32x5	4200	4200	6000	5600	5400
Buick.....1922-48-6-50	Own	6-31x45 1/2	124	34x4 1/2	.....	.....	1735	2325	2635	Norwalk.....430-KS	Lyc	4-31x45	116	32x3 1/2	.....	1035	.....	.....	.....
Buick.....E.C.4	Lyc	4-31x45	116	31x4	.....	1195	.....	.....	.....	Oakland.....34-C	Own	6-21x44 1/2	115	32x4	1095	1145	1625	1725	1725
Buick.....E.C.6	Lyc	6-31x45	116	33x4	.....	1345	.....	1760	1850	Ogen.....6-40	Own	6-31x45 1/2	124	33x5	13850	3750	3900	5000	5100
Cadillac.....30	Own	8-31x45 1/2	132	34x4 1/2	3700	13790	.....	4950	5190	Oldsmobile.....43-A	Own	4-31x45 1/2	115	32x4	11325	1345	.....	1895	2100
Carroll.....C	Roeb	6-31x45	128	.....	3985	3985	.....	.....	.....	Oldsmobile.....37A	Own	6-21x44 1/2	112	32x4	11450	1450	2145	2145	2145
Carroll.....D	Roeb	6-31x45	128	.....	3185	3185	.....	.....	.....	Oldsmobile.....46	Own	8-21x44 1/2	122	32x4 1/2	11825	1875	2775	2775	2775
Case.....V	Cont.	6-31x45 1/2	126	34x4 1/2	12250	2250	2900	3285	.....	Oldsmobile.....47	Own	8-21x44 1/2	115	32x4	11725	2225	2425	2425	2425
Chalmers.....6-30	Own	6-31x45 1/2	117	32x4	1495	1545	.....	2295	2445	Overland.....4	Own	4-31x45	100	30x3 1/2	695	695	.....	1000	1275
Chalmers.....6-30	Own	6-31x45 1/2	122	32x4 1/2	.....	.....	1795	.....	.....	Packard.....Single-Six	Own	6-31x45 1/2	116	33x4 1/2	2975	2975	3750	3975	3975
Champion.....Tourist	Lyc	4-31x45	113	32x3 1/2	1095	.....	.....	.....	.....	Packard.....Twin-Six	Own	12-3 x 5	136	35x5	4850	4850	6600	6800	6800
Champion.....Special	H-S	4-31x45	118	32x4	11395	1395	.....	2885	.....	Paige.....6-42	Own	6-31x45	119	32x4	1635	1635	2450	2570	2570
Chandler.....Six	Own	6-31x45	123	33x4	1785	1785	1785	2785	2885	Paige.....6-46	Cont.	6-31x45	131	33x4 1/2	12975	13295	2875	3755	3830
Chevrolet.....490	Own	4-31x45	102	30x3 1/2	625	625	.....	975	975	Pan.....A	Own	4-31x45	108	33x4	1500	1500	.....	.....	.....
Chevrolet.....FB	Own	4-31x45 1/2	110	33x4	975	975	.....	1575	1575	Pan American E&F 4-55	H-S	6-31x45	121	33x4	2000	2000	2100	.....	.....
Cleveland.....40	Own	6-3 x 4 1/2	112	32x4	1295	1295	.....	2195	2295	Parson.....1921	Own	8-21x44 1/2	125	32x4	.....	2000	.....	3000	3000
Climber Four.....H-S	.....	4-31x45	117	.....	1450	1385	.....	.....	.....	Paterson.....650	Own	6-31x45 1/2	130	33x4	.....	1695	1625	2895	2895
Climber Six.....S	H-S	6-31x45	126 1/2	32x4 1/2	2250	2250	.....	.....	.....	Peelless.....56-S-7	Own	8-31x45	125	34x4 1/2	12990	2990	3690	3990	3990
Cole.....370	North	8-31x45 1/2	127	33x5	2550	12995	2795	3695	3995	Peters.....Lyc	Own	2-31x45 1/2	90	28x3	385	.....	.....	.....	.....
Columbia Challenger	Rut.	6-31x45	115	32x4	1495	.....	.....	.....	.....	Piedmont.....4-30	Own	4-31x45	116	32x3 1/2	.....	1270	.....	.....	.....
Columbia.....D-C-53	Cont.	6-31x45 1/2	115	32x4	1795	1795	.....	2495	2595	Piedmont.....6-40	Cont.	6-31x45 1/2	122	32x4	1495	1495	.....	.....	.....
Comet.....C-53	Cont.	6-31x45 1/2	125	33x4 1/2	2350	2450	.....	3650	.....	Pierce-Arrow.....Own	6-4 x 5 1/2	138	33x5	8000	17500	7500	8500	9000	
Commonwealth.....44	H-S	4-31x45	117	32x4	1395	.....	.....	2465	.....	Pilot.....6-45	Teetor	6-31x45	120	32x4	1495	1895	.....	.....	.....
Crawford.....21-40	Cont.	6-31x45 1/2	122 1/2	32x4	3000	3000	.....	4500	.....	Pilot.....6-50	H-S	6-31x45	126	32x4 1/2	2285	2285	2335	3350	3400
Crow-Ekhart.....L43-65	Lyc	4-31x45	117	32x4 1/2	1295	1295	.....	.....	.....	Porter.....40	Own	4-41x46 1/2	142	35x5	6750	Chassis	Chassis	Chassis	Chassis
Crow-Ekhart.....S43-65	H-S	6-31x45	117	33x4	11545	1545	.....	2395	.....	Premier.....6-D	Own	6-31x45 1/2	126 1/2	33x5	3790	13690	3890	4690	5190
Daniels.....D-19	Own	8-31x45 1/2	132	34x4 1/2	15350	15350	5350	6250	6950	Proccar.....6-40 A	Falls	6-31x45 1/2	117	33x4	1295	1295	.....	.....	.....
Davis.....61-67	Wisc	6-31x45 1/2	120	33x4	11995	1895	12150	2795	2795	Raleigh.....A-6-60	H-S	6-31x45	122	32x4 1/2	2250	2250	3100	3200	3200
Dispatch.....H-S-70	H-S	4-31x45	112	32x4	1445	1445	1350	1525	1575	R & V Knight.....R	Own	4-31x45	116	32x4	2150	2150	2850	2950	2950
Dixie Flyer.....H-S-70	H-S	4-31x45	112	32x4	1445	1445	1350	1525	1575	R & V Knight.....Own	6-31x45 1/2	127	32x4 1/2	3350	13350	3350	4000	4200	
Dodge Brothers.....6-80	Own	4-31x45 1/2	114	32x4	935	935	.....	1585	1785	Roe.....T-6	Own	6-31x45	120	33x4	1850	1850	2700	2750	2750
Dorris.....6-80	Own	6-4 x 5	132	33x5	14785	4785	5800	6690	.....	Revere.....C	Dues.	4-41x46	131	32x4 1/2	4850	4650	14650	6500	6500
Dort.....17-12	D-Ly	4-31x45	108	31x4	985	985	.....	1835	1885	Reamer.....6-54-F	Cont.	6-31x45 1/2	128	32x4 1/2	3150	13150	3250	13985	14100
Dupont.....A	Own	4-31x45 1/2	124	32x4 1/2	3400	13400	.....	4900	.....	Reamer.....4-75-E	Dues.	4-41x46	128	32x4 1/2	4150	3985	.....	.....	.....
Elcar.....E-4	Lyc	4-31x45	117	33x4	1195	1195	.....	.....	.....	Rolla-Reyco.....Own	6-41x46 1/2	143 1/2	33x5	U. S.	Chassis	Chassis	Chassis	Chassis	
Elcar.....E-4	Cont.	6-31x45 1/2	117	33x4	11595	1595	11195	2395	2495	Romer.....Cont.	6-31x45 1/2	120	32x4	2000	2000	2100	2450	2750	
Elgin.....E-1	Falls	6-31x45 1/2	118	33x4	1595	1495	11595	2395	2395	Saxon.....125	Own	4-31x45	112	32x4	1545	1495	.....	2295	2295
Essex.....Own	Own	4-31x45	108 1/2	32x4	1445	1445	1950	2300	.....	Sayers Six.....DP	Own	6-31x45 1/2	118	33x4	2495	2195	.....	3295	3295
Fergus.....S-5-21	Own	6-31x45	126	32x4 1/2	.....	Chassis	8500	.....	.....	Scripps-Booth.....B-30-42	North	6-21x44 1/2	115	32x4	1275	1295	1950	2100	2100
Ferris.....T	Own	6-31x45 1/2	130	32x4 1/2	3350	.....	2595	3075	.....	Scripps-Booth.....F-43-46	Cont.	6-31x45 1/2	115	32x4	1470	1490	2380	2675	2675
Ford.....8-8	Own	4-31x45	100	30x3 1/2	3370	1115	695	760	.....	Seneca.....L & O	Lell.	4-31x45 1/2	108	30x3 1/2	1045	1045	.....	.....	.....
Franklin.....Four	Own	6-31x45	115	32x4	2550	2550	12530	3650	.....	Severin.....Six	Own	6-31x45 1/2	122	33x4	1455	1485	2100	2250	2250
Friend.....Four	Own	4-31x45 1/2	112	32x3 1/2	1285	1285	1985	2085	.....	Severin.....Six	Own	6-31x45 1/2	122	33x5	2550	2550	3250	3350	3350
Gardner.....G	Lyc	4-31x45	112	32x4 1/2	1995	1995	.....	1795	.....	Sheridan.....4	North	4-31x45 1/2	116	33x4					

Specifications of Current Motor Truck Models

NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive
				Front	Rear						Front	Rear						Front	Rear	
Acason	3 1/2	\$1650	3 1/2 x 5	34 x 5 1/2	34 x 5 1/2	W	Concord, BX	2 1/2	\$3600	4 1/2 x 5 1/2	36 x 4	36 x 8	W	Gary, I	1 1/2	\$2550	4 x 5 1/2	36 x 3 1/2	36 x 5	W
Acason, R	1 1/2	2260	3 1/2 x 5 1/2	36 x 3 1/2	36 x 5	W	Cook, 41	2	3000	4 x 5 1/2	36 x 6 1/2	38 x 7 1/2	W	Gary, J	2 1/2	3150	4 1/2 x 5 1/2	36 x 4	36 x 7	W
Acason, RB	1 1/2	2450	3 1/2 x 5 1/2	36 x 3 1/2	36 x 6	W	Corbett, E	1	2200	3 1/2 x 5 1/2	34 x 3 1/2	34 x 4	W	Gary, K	3 1/2	4050	4 1/2 x 6	36 x 5	40 x 5 1/2	W
Acason, H	2 1/2	3295	4 1/2 x 5 1/2	36 x 4	36 x 4 1/2	W	Corbett, D	1 1/2	2600	3 1/2 x 5 1/2	36 x 3 1/2	36 x 5	W	Gary, M	5	5150	5 x 6 1/2	36 x 6	40 x 6 1/2	W
Acason, L	3 1/2	4295	4 1/2 x 5 1/2	36 x 5	36 x 5 1/2	W	Corbett, C	2	3150	4 1/2 x 5 1/2	36 x 3 1/2	36 x 7	W	Gersix M	1 1/2	3100	4 x 5 1/2	36 x 3 1/2	36 x 7	W
Acason, M	5	5250	5 x 6 1/2	36 x 6	40 x 12	W	Corbett, B	2 1/2	3300	4 1/2 x 5 1/2	36 x 4	36 x 7	W	Gersix K	2 1/2	3500	4 1/2 x 5 1/2	36 x 4	36 x 8	W
Ace, C	1 1/2	2295	3 1/2 x 5 1/2	34 x 3 1/2	34 x 5	W	Corbett, A	3 1/2	4100	4 1/2 x 5 1/2	36 x 5	36 x 10	W	Gersix	3 1/2	4500	4 1/2 x 6	36 x 5	40 x 12	W
Ace, A	2 1/2	2795	4 1/2 x 5 1/2	36 x 4	36 x 7	W	Corbett, AA	5	5000	4 1/2 x 6	36 x 6	40 x 6 1/2	W	Giant, 15-A	1 1/2	2250	3 1/2 x 5 1/2	34 x 3 1/2	34 x 5	W
Acme, G	3 1/2	.....	3 1/2 x 5	35 x 5 1/2	35 x 5 1/2	W	Cyclone	1 1/2	2800	3 1/2 x 5	34 x 5 1/2	36 x 6 1/2	W	Giant, 16	2	3150	4 1/2 x 5 1/2	36 x 4	36 x 7	W
Acme, B	1	.....	3 1/2 x 5	34 x 3 1/2	34 x 5	W	Dart, S	1 1/2	.....	3 1/2 x 5 1/2	34 x 3 1/2	34 x 6	W	Giant, 17	3 1/2	4150	4 1/2 x 5 1/2	36 x 5	36 x 5 1/2	W
Acme, F	1 1/2	.....	3 1/2 x 5	34 x 3 1/2	34 x 5	W	Dart, M	2 1/2	.....	4 1/2 x 5 1/2	36 x 4	36 x 7	W	Globe D-20	1 1/2	1495	3 1/2 x 5	33 x 4 1/2	33 x 4 1/2	B
Acme, A	3 1/2	.....	4 1/2 x 5 1/2	36 x 4	36 x 7	W	Dart, W	3 1/2	.....	4 1/2 x 6	36 x 5	36 x 10	W	Globe	1	1495	3 1/2 x 5	33 x 5	33 x 5	B
Acme, C	3 1/2	.....	4 1/2 x 5 1/2	36 x 5	40 x 10	W	Day-Elder, A	1	2225	3 1/2 x 5	34 x 3 1/2	34 x 4	W	Golden West, GH	8	5000	4 1/2 x 6	36 x 7	36 x 7	W
Acme, E	1	.....	3 1/2 x 5	36 x 6	40 x 12	W	Day-Elder, B	1 1/2	2425	3 1/2 x 5	34 x 3 1/2	34 x 5	W	Golden West, G	3 1/2	4500	4 1/2 x 6	36 x 6	36 x 6	W
Acme, Multi-Trk 20	3 1/2	1995	4 x 5 1/2	34 x 5	34 x 5	B	Day-Elder, D	2	2900	4 1/2 x 5 1/2	36 x 4	36 x 7	W	Golden West, H	3 1/2	5000	4 1/2 x 6	36 x 6	36 x 6	W
All-Power, C	3 1/2	5800	4 1/2 x 6	36 x 7	36 x 10	W	Day-Elder, C	2 1/2	3125	4 1/2 x 5	36 x 4	36 x 7	W	Golden West, I	4	5500	4 1/2 x 6	36 x 6	36 x 6	W
All-American, B-1	1	1795	3 1/2 x 5	32 x 4	32 x 4	I	Day-Elder, F	3 1/2	3950	4 1/2 x 5 1/2	36 x 5	36 x 5 1/2	W	Golden West, K	7	6000	5 1/2 x 6	36 x 6	36 x 6	W
All-American C-1	1 1/2	2195	3 1/2 x 5	34 x 4	34 x 5	I	Day-Elder, E	5	4575	4 1/2 x 5 1/2	36 x 5	36 x 6 1/2	W	Golden West, HA	7	6000	4 1/2 x 6	36 x 6	36 x 10	W
American, 25	2 1/2	3350	4 x 6	36 x 4	36 x 4 1/2	W	Dearborn, F	1 1/2	2180	3 1/2 x 5 1/2	34 x 4	34 x 5	W	Gove, A-1	2 1/2	2495	4 1/2 x 5 1/2	36 x 5	36 x 7	I
American, 40	4	4275	4 1/2 x 6	36 x 5	36 x 5 1/2	W	Dearborn, 48	2	2590	3 1/2 x 5 1/2	35 x 5 1/2	34 x 7 1/2	W	Graham Bros. A	1 1/2	1495	3 1/2 x 5	35 x 5 1/2	35 x 5 1/2	D
Apez, G	1 1/2	1675	3 1/2 x 5	33 x 5 1/2	33 x 5 1/2	I	Defiance, G	1	1975	3 1/2 x 5	35 x 5 1/2	35 x 5 1/2	I	Graham-Bern, 10	1 1/2	2050	3 1/2 x 5	36 x 3 1/2	36 x 5	I
Apez, D	1 1/2	1915	3 1/2 x 5 1/2	34 x 3 1/2	34 x 4	I	Defiance, D	1 1/2	2550	3 1/2 x 5	35 x 5 1/2	36 x 6 1/2	I	Graham-Bern, 15	1 1/2	2725	3 1/2 x 5	36 x 3 1/2	36 x 5	I
Apez, E	2 1/2	2895	4 1/2 x 5 1/2	36 x 4	36 x 7	I	Defiance, E	2	2750	3 1/2 x 5	35 x 5 1/2	36 x 7 1/2	I	Graham-Bern, 20	2	3175	4 1/2 x 5 1/2	36 x 4	36 x 7	W
Apez, F	3 1/2	3975	4 1/2 x 6	36 x 5	36 x 10	I	DeKalb, E2 1/2	2	2800	3 1/2 x 5	36 x 4	36 x 6	W	Graham-Bern, 25	2 1/2	3575	4 1/2 x 5 1/2	36 x 4	36 x 7	W
Armstrong, 20	2 1/2	.....	3 1/2 x 5 1/2	34 x 3 1/2	34 x 5	W	DeKalb, E2	2 1/2	2250	4 1/2 x 5 1/2	34 x 3 1/2	36 x 5	W	Graham-Bern, 35	3 1/2	4375	4 1/2 x 5 1/2	36 x 5	40 x 5 1/2	W
Armstrong, HW	2 1/2	.....	4 1/2 x 5 1/2	36 x 4	36 x 7	W	DeMartini 1 1/2	1 1/2	2600	3 1/2 x 5	34 x 3 1/2	34 x 6	W	Graham-Bern, 50	5	5275	4 1/2 x 6	36 x 6	40 x 6 1/2	W
Armstrong, KW	1 1/2	.....	4 1/2 x 6	36 x 5	36 x 5 1/2	W	DeMartini 2	2	3300	4 x 5 1/2	36 x 3 1/2	36 x 7	W	Hahn, J4	1	.....	3 1/2 x 5	34 x 5	34 x 5	W
Atco, B	1 1/2	.....	3 1/2 x 5 1/2	34 x 5	36 x 6	I	DeMartini 3	3	4250	4 1/2 x 5 1/2	36 x 4	36 x 10	W	Hahn, CD	1 1/2	.....	4 1/2 x 5 1/2	36 x 3 1/2	36 x 6	W
Atco, B1	1 1/2	.....	3 1/2 x 5 1/2	34 x 5	36 x 6	I	DeMartini 4	4	4800	4 1/2 x 6	36 x 5	36 x 12	W	Hahn, EE	2 1/2	.....	4 1/2 x 5 1/2	36 x 4	36 x 8	W
Atco, A	2 1/2	.....	4 1/2 x 5 1/2	36 x 4	36 x 8	W	Denby, 12	1	1825	3 1/2 x 5	35 x 5	36 x 6	I	Hahn, F	3 1/2	.....	4 1/2 x 5 1/2	36 x 5	36 x 10	W
Atlas, M.D.	1 1/2	.....	3 1/2 x 5	32 x 4 1/2	32 x 4 1/2	I	Denby, 33	1 1/2	2300	3 1/2 x 5	35 x 5 1/2	35 x 7 1/2	I	Hahn, EF	5	.....	4 1/2 x 6	36 x 6	40 x 12	W
Atterbury, 20R	1 1/2	2775	3 1/2 x 5	34 x 3 1/2	34 x 5	W	Denby, 134	2	2600	3 1/2 x 5	36 x 3 1/2	36 x 6	I	Hal Fur, E	1	2350	4 x 5	35 x 5 1/2	35 x 5 1/2	W
Atterbury, 7CX	2 1/2	3375	4 1/2 x 5 1/2	36 x 4	36 x 4 1/2	W	Denby, 25	3	3300	4 1/2 x 5 1/2	36 x 4	36 x 7	I	Hal Fur, B	2	3250	4 1/2 x 5 1/2	35 x 5	35 x 7	W
Atterbury, 7D	3 1/2	4175	4 1/2 x 5 1/2	36 x 5	40 x 5 1/2	W	Denby, 27	4	4200	4 1/2 x 5 1/2	36 x 5	36 x 10	I	Hal Fur, F	3 1/2	4250	4 1/2 x 5 1/2	36 x 6	40 x 10 1/2	W
Atterbury, 8E	3 1/2	5575	4 1/2 x 6	36 x 5	40 x 6 1/2	W	Denby, 210	5	4550	4 1/2 x 5 1/2	36 x 6	40 x 6 1/2	I	Hall	3 1/2	3100	3 1/2 x 5	34 x 5 1/2	34 x 7	W
Autocar, 21UF	1 1/2	2300	3 1/2 x 5 1/2	34 x 4	34 x 5	D	Dependable, A	1 1/2	1650	3 1/2 x 5	34 x 5	36 x 6	W	Hall	2 1/2	3275	4 1/2 x 5 1/2	36 x 4	36 x 6	W
Autocar, 21UG	1 1/2	2400	3 1/2 x 5 1/2	34 x 4	34 x 5	D	Dependable, C	1 1/2	2350	3 1/2 x 5 1/2	34 x 3 1/2	34 x 5	W	Hall	3 1/2	4100	4 1/2 x 5 1/2	36 x 5	36 x 5 1/2	W
Autocar, 26V	.....	4350	4 1/2 x 5 1/2	34 x 5	36 x 10	D	Dependable, D	2	2650	4 x 5 1/2	34 x 5	36 x 6	W	Hall	5	5100	4 1/2 x 5 1/2	36 x 5	40 x 6 1/2	W
Autocar, 26-E	.....	4500	4 1/2 x 5 1/2	34 x 5	36 x 10	D	Dependable, E	2 1/2	2950	4 1/2 x 5 1/2	34 x 4	36 x 7	W	Hall	7	5100	4 1/2 x 5 1/2	36 x 5	40 x 6 1/2	C
Available, H1 1/2	1 1/2	2750	4 x 5 1/2	36 x 3 1/2	36 x 5	W	Dependable, G	3 1/2	3550	4 1/2 x 5 1/2	36 x 6	36 x 8	W	Harvey, WEA	1 1/2	2550	4 1/2 x 5 1/2	34 x 3 1/2	34 x 5	W
Available, H2 1/2	2 1/2	3475	4 x 5 1/2	36 x 4	36 x 8	W	Diamond-T, O	1	2500	3 1/2 x 5 1/2	34 x 5 1/2	36 x 6 1/2	W	Harvey, WFA	2 1/2	3300	4 1/2 x 5 1/2	36 x 4	36 x 7	W
Available, H3 1/2	3 1/2	4475	4 1/2 x 5 1/2	36 x 5	40 x 5 1/2	W	Diamond-T, FS	1 1/2	2960	3 1/2 x 5 1/2	34 x 3 1/2	36 x 5	W	Harvey, WHA	3 1/2	4300	4 1/2 x 6	36 x 5	36 x 5 1/2	W
Available, H5	5	5375	4 1/2 x 6	36 x 6	40 x 12	W	Diamond-T, T	1 1/2	2850	3 1/2 x 5 1/2	36 x 5	36 x 6	W	Harvey, WKA	5	5200	4 1/2 x 6	36 x 6	40 x 6 1/2	W
Available, H7	7	6000	5 x 6	36 x 6	40 x 14	B	Diamond-T, U	2	3285	4 x 5 1/2	36 x 4	36 x 7	W	Hawkeye, K	1 1/2	1850	3 1/2 x 5 1/2	34 x 3 1/2	34 x 5	I
Avery	1	.....	3 x 4	34 x 5 1/2	34 x 5	I	Diamond-T, K	3 1/2	4675	4 1/2 x 5 1/2	36 x 5	36 x 5 1/2	W	Hawkeye, M	2	2650	4 1/2 x 5 1/2	36 x 4	36 x 6	I
Back, A, Jr.	1	1800	3 1/2 x 5																	

Specifications of Current Motor Truck Models—Continued

NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive
				Front	Rear						Front	Rear						Front	Rear	
Kelly-S, K-45	4	\$1550	4 1/2 x 6 1/2	36x5	40x6d	C	Ogden, A1	1 1/2	\$2550	3 1/2 x 5	36x3 1/2	36x5	W	Service, 71	3 1/2	\$4285	4 1/2 x 5 1/2	36x5	36x5d	W
Kelly-S, K-50	4	4900	4 1/2 x 6 1/2	36x6	40x6d	C	Ogden, E	2 1/2	3250	4 1/2 x 5 1/2	36x4	36x7	W	Service, 76	3 1/2	4465	4 1/2 x 6	36x5	36x5d	W
Kelly-S, K-60	6	5100	4 1/2 x 6 1/2	36x6	40x7d	C	Old Hickory, W	1	2175	3 1/2 x 5	36x3 1/2	36x4	W	Service, 101	5	5275	4 1/2 x 6	36x6	40x6d	W
Keystone, 40	2	2450	3 1/2 x 5 1/2	34x5 1/2	38x7 1/2	I	Old Reliable, A	1 1/2	2350	4 x 5	34x4	36x6	W	Signal, NF	1	2475	4 1/2 x 5	34x5 1/2	38x6 1/2	W
Kimball, AB	2	3675	4 x 6	36x4	36x7	W	Old Reliable, B	2 1/2	3500	4 1/2 x 6	34x4	36x4d	W	Signal, H	1 1/2	2925	4 1/2 x 5 1/2	34x4	36x6	W
Kimball, AC	2 1/2	3975	4 1/2 x 6	36x4	36x8	W	Old Reliable, C	3 1/2	4250	4 1/2 x 6	36x5	36x5d	W	Signal, J	2 1/2	3275	4 1/2 x 5 1/2	34x4	36x8	W
Kimball, AK	3	4500	4 1/2 x 6	36x4	36x10	W	Old Reliable, D	5	5250	4 1/2 x 6	36x6	40x6d	W	Signal, M	3 1/2	4275	4 1/2 x 5 1/2	36x5	40x6d	W
Kimball, AE	4	5000	4 1/2 x 6	36x5	40x12	W	Old Reliable, KLM	7	6000	4 1/2 x 6 1/2	36x6	40x7d	C	Signal, R	5	5300	4 1/2 x 6	36x6	40x6 1/2	W
Kimball, AF	5	5975	5 x 6	36x6	40x7d	W	Oldsmobile Econ.	1	1500	3 1/2 x 5 1/2	35x5 1/2	35x5 1/2	I	Southern, 10	1	2090	3 1/2 x 5	34x3 1/2	34x4	W
Kissel, Express	1	1985 1/2	3 1/2 x 5 1/2	34x5 1/2	34x5 1/2	W	Olympic, A	2 1/2	3500	4 1/2 x 5 1/2	36x4	36x7	W	Southern, 15	1 1/2	2580	3 1/2 x 5 1/2	36x6 1/2	34x4	W
Kissel, Utility	1 1/2	2775	3 1/2 x 5 1/2	36x5	36x5	W	Oneida, A-9	1 1/2	2350	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Southern, 20	2	2990	4 1/2 x 5 1/2	36x6	40x6	W
Kissel, Freight	2 1/2	3475	4 1/2 x 5 1/2	36x4	36x7	W	Oneida, B-9	1 1/2	2915	4 x 5 1/2	36x4	36x7	W	Standard, 1-K	1-1 1/2	1950	3 1/2 x 5	34x3 1/2	34x5 1/2	W
Kissel, H. D.	4	4475	4 1/2 x 5 1/2	36x5	36x5 1/2	W	Oneida, C-9	2 1/2	3390	4 x 5 1/2	36x4	36x7	W	Standard, 76	2 1/2	3100	4 1/2 x 5 1/2	36x4	36x7	W
Kleiber, AA	1	2600	4 1/2 x 5 1/2	34x3 1/2	34x5	W	Oneida, D-9	3 1/2	4345	4 1/2 x 5 1/2	36x5	36x10	W	Standard, 5-K	3 1/2-4	4000	4 1/2 x 5 1/2	36x5	36x10	W
Kleiber, A	1 1/2	3100	4 1/2 x 5 1/2	36x3 1/2	36x6	W	Oneida, E-9	5	5460	4 1/2 x 5 1/2	36x6	40x12	W	Standard, 5-K	5-6	5250	4 1/2 x 6	36x6	40x12	W
Kleiber, BB	2	3600	4 1/2 x 5 1/2	36x4	36x7	W	Orleans, A	1 1/2	2750	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Sterling, 1 1/2	1 1/2	3200	4 x 5 1/2	36x3 1/2	36x6	W
Kleiber, B	2 1/2	4200	4 1/2 x 5 1/2	36x5	36x8	W	Orleans, B	2 1/2	3250	4 1/2 x 5 1/2	36x4	36x7	W	Sterling, 2	2	3500	4 x 5 1/2	36x4	36x6	W
Kleiber, C	3 1/2	4900	4 1/2 x 5 1/2	36x5	36x5d	W	Orleans, C	3 1/2	3750	4 1/2 x 5 1/2	36x4 1/2	36x8	W	Sterling, 2 1/2	2 1/2	3650	4 1/2 x 5 1/2	36x4	36x6 1/2	W
Kleiber, D	3 1/2	5600	5 x 6 1/2	36x6	40x12	W	Orleans, D	5	4250	4 1/2 x 5 1/2	36x6	40x8	W	Sterling, 3 1/2	3 1/2	4850	4 1/2 x 6 1/2	36x5	40x5d	W
Koehler, D	1 1/2	....	4 1/2 x 5	34x3 1/2	34x5	W	Oshkosh, A	2	3750	3 1/2 x 5	36x6 1/2	36x6 1/2	W	Sterling, 5-C	5	5500	5 x 6 1/2	36x6	40x6d	W
Koehler, M	2 1/2	....	4 x 5 1/2	36x4	36x7	W	Oshkosh, AA	2	3850	3 1/2 x 5	36x6 1/2	36x6 1/2	W	Sterling, 5-W	5	6000	5 x 6 1/2	36x6	40x6d	W
Koehler, MCS	2 1/2	....	4 x 5 1/2	36x4	36x7	W	Oshkosh, B	2 1/2	4150	4 x 5 1/2	36x7	36x7 1/2	W	Sterling, 7 1/2	7 1/2	6500	5 x 6 1/2	36x6	40x7d	W
Koehler, F	3 1/2	....	4 1/2 x 5 1/2	36x5	36x10	W	Oshkosh, BB	2 1/2	4300	4 x 5 1/2	36x7	36x7 1/2	W	Stewart, 11	1 1/4	1350	3 1/2 x 5 1/2	32x4 1/2	32x4 1/2	W
Koehler, MT, Trac.	5	....	4 x 5 1/2	36x4	36x7	W	Packard, ED	....	3500	4 1/2 x 5 1/2	36x4	36x7	W	Stewart, 15	1 1/4	1875	3 1/2 x 5	35x5 1/2	35x5 1/2	W
L.M.C., 2-20	2 1/2	2540	4 1/2 x 5 1/2	36x4	36x4d	I	Packard, EC	....	4100	4 1/2 x 5 1/2	36x5	36x5d	W	Stewart, 9	1 1/2	2200	3 1/2 x 5	34x3 1/2	34x5	W
Lange, B	2 1/2	3350	4 1/2 x 5 1/2	36x4	36x6	C	Packard, EF	....	4500	5 x 5 1/2	36x6	40x6 1/2	W	Stewart, 7	2	2800	4 1/2 x 5 1/2	34x4	34x7	W
Larrabee, U	1 1/2	2400	3 1/2 x 5	34x3 1/2	34x5	W	Packard, EX	....	4000	4 1/2 x 5 1/2	36x6	40x8 1/2	W	Stewart, 7-X	2 1/2	2950	4 1/2 x 5 1/2	34x4	34x7	W
Larrabee, SK	2 1/2	3200	4 1/2 x 5 1/2	36x4	36x7	W	Paige, 52-19	1 1/2	2890	4 x 5 1/2	34x3 1/2	34x6	W	Stewart, 10	3 1/2	3850	4 1/2 x 5 1/2	36x5	36x5d	W
Larrabee, FL	3 1/2	4000	4 1/2 x 5 1/2	36x5	36x5d	W	Paige, 54-29	2 1/2	3400	4 1/2 x 5 1/2	34x4	34x4d	W	Stewart, 10-X	3 1/2	3850	4 1/2 x 6	36x5	36x5d	W
Larrabee, FW	5	4800	4 1/2 x 6	36x6	40x6d	W	Paige, 51-18	3 1/2	4235	4 1/2 x 5 1/2	36x5	36x5d	W	Stoughton, A	1	1995	3 1/2 x 5 1/2	34x4 1/2	35x5 1/2	W
Li, L	1	2350	3 1/2 x 5 1/2	35x5 1/2	35x5 1/2	W	Parker, F29	2	3500	4 x 6	34x4	36x4d	W	Stoughton, B	1 1/2	2350	3 1/2 x 5 1/2	36x3 1/2	36x5	W
Luedinghaus, C	1 1/2	2100	3 1/2 x 5	35x5 1/2	35x5 1/2	W	Parker, J29	3 1/2	4400	4 1/2 x 6	36x5	40x5d	W	Stoughton, D	2	2900	4 x 5 1/2	36x4	36x7	W
Luedinghaus, W	1 1/2	2700	3 1/2 x 5 1/2	34x3 1/2	34x5	W	Parker, M29	5	5500	4 1/2 x 6	36x6	40x6d	W	Stoughton, F	3	3600	4 1/2 x 5 1/2	36x5 1/2	36x5 1/2	W
Luedinghaus, M	1 1/2	3150	4 1/2 x 5 1/2	36x4	36x7	W	Patriot, Reverse	1 1/2	1785	3 1/2 x 5	35x5 1/2	35x5 1/2	W	Sullivan, E	2	2335	4 1/2 x 5 1/2	36x4	36x7	W
Maccar, L	1 1/2	2925	4 1/2 x 5 1/2	36x4	36x8	W	Patriot, Lincoln	1 1/2	2450	4 x 5 1/2	34x3 1/2	34x5	W	Sullivan, H	3 1/2	4650	4 1/2 x 6	36x5	36x5d	W
Maccar, H-2	2 1/2	3750	4 1/2 x 5 1/2	36x4	36x4d	W	Patriot, Wash	2 1/2	2450	4 1/2 x 5 1/2	36x4	36x7	W	Superior, D	1	1650	3 1/2 x 5	34x4 1/2	34x4	W
Maccar, M-2	3 1/2	4500	4 1/2 x 5 1/2	36x5	36x5d	W	Piedmont, 4-30	1 1/2	1885	3 1/2 x 5	34x4 1/2	34x4 1/2	W	Superior, E	2	2600	4 1/2 x 5 1/2	36x4	36x6	W
Maccar, G	5	5500	4 1/2 x 6	36x5	40x6d	W	Pierce-Arrow	2	3750	4 x 5 1/2	36x4	36x4d	W	Super Trac, 50	2 1/2	3300	4 x 6	36x4	36x8	W
MacDonald, A	7 1/2	5750	4 1/2 x 6	40x7	40x14	I	Pierce-Arrow	3 1/2	4950	4 1/2 x 6 1/2	36x5	36x5d	W	Super Trac, 70	3 1/2	4200	4 1/2 x 6	36x5	40x5d	W
Mack, AB D.R.	1 1/2	3450	4 x 5	36x4	36x3 1/2d	D	Pioneer, 50	5	5700	4 1/2 x 6 1/2	36x5	40x6d	W	Super Trac, 100	5	5300	4 1/2 x 6	36x5	40x12	W
Mack, AB	2 1/2	3400	4 x 5	36x4	36x4d	C	Pioneer, 50	1	1580	3 1/2 x 4 1/2	32x4 1/2	32x4 1/2	W	Super Trac, 150	7 1/2	6300	5 x 6	36x6	40x12	W
Mack, AB Chain	1 1/2	3000	4 x 5	36x4	36x3 1/2d	C	Pittsburgh, B 21	2 1/2-3	3800	4 1/2 x 5 1/2	36x5	36x7	W	Tan, A35	1 1/2	1095	3 1/2 x 5	34x4	34x4	W
Mack, AB Chain	2	3300	4 x 5	36x4	36x4d	C	Pony	400	29x4 1/2	28x3 1/2	28x3 1/2	C	Tan, TK39	1 1/2	1150	3 1/2 x 5	36x6	36x7	W	
Mack, AB D.R.	2	3750	4 x 5	36x4	36x4d	D	Power, F	1 1/2	....	3 1/2 x 5 1/2	36x6	36x6	W	Tiffin, GW	1 1/2	2085	4 1/2 x 5 1/2	36x3 1/2	36x5	W
Mack, AC Chain	3 1/2	4950	5 x 6	36x5	40x5d	C	Power, C	3 1/2	....	4 1/2 x 5 1/2	36x5	40x10	W	Tiffin, MW	2 1/2	3580	4 1/2 x 5 1/2	36x4	36x3 1/2	W
Mack, AC Chain	5	5500	5 x 6	36x6	40x6d	C	Premcar, B-143	1 1/2	2475	3 1/2 x 5	36x6 1/2	36x6 1/2	W	Tiffin, FW	3 1/2	4700	4 1/2 x 5 1/2	36x5	40x6 1/2	W
Mack, AC Chain	6 1/2	5750	5 x 6	36x6	40x12	C	Ramier, R-1													

Specifications of Current Motor Truck Models—Continued

NAME AND MODEL	Tons Capacity	Chassis Price	Base and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Base and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Base and Stroke	TIRES		Final Drive
				Front	Rear						Front	Rear						Front	Rear	
Ward-LaF., 5A	5	\$5590	5 x 6 1/2	36x6	36x6d	W	Wichita, O	3 1/2	\$4000	4 1/2 x 6	36x5*	36x5d*	W	Winther, 430	1 1/2	\$2850	3 1/2 x 5	32x4	32x4	I
Watson, E	1	1865	3 1/2 x 5 1/2	34x4 1/2	31x4 1/2	W	Wichita, S	5	5000	4 1/2 x 6	36x6	40x6d	W	Winther, 39	1 1/2	2450	3 1/2 x 5	32x4 1/2	34x5	I
Watson, N	3 1/2	4250	4 1/2 x 5 1/2	36x5	36x10	W	Wilcox, AA	1	2100	3 1/2 x 5 1/2	36x4*	36x4*	W	Winther, 49	2	3250	4 x 5	34x4	34x4d	I
Western, W1 1/2	1 1/2	2550	4 1/2 x 5 1/2	36x3 1/2	36x5*	W	Wilcox, B	1 1/2	2775	4 1/2 x 5	36x4	36x5	W	Winther, 70	3 1/2	4200	4 x 5	36x5	36x5d	I
Western, L1 1/2	1 1/2	2550	3 1/2 x 5	36x3 1/2	36x5*	W	Wilcox, D	2 1/2	3300	4 1/2 x 5	36x4	36x3 1/2	W	Winther, 450	4	3600	4 x 5	34x5	36x6	I
Western, W2 1/2	2 1/2	3250	4 1/2 x 5 1/2	36x4	36x7	W	Wilcox, E	3 1/2	4250	4 1/2 x 6	36x5*	36x5d*	W	Winther, 109	5	5250	4 1/2 x 6	36x6	40x5d	I
Western, L2 1/2	2 1/2	3250	4 1/2 x 6	36x4	36x7	W	Wilcox, F	5	5200	4 1/2 x 6 1/2	36x5	40x6d	W	Winther, 140	7	5900	5 x 6	36x6	40x7d	I
Western, W3 1/2	3 1/2	4250	4 1/2 x 6	36x5	40x5d	W	Wilson, F	1 1/2	2270	3 1/2 x 5	36x3 1/2	36x5	W	Wisconsin B	1	1950	4 x 5 1/2	34x5f	34x5f	W
White, 15	2	2400	3 1/2 x 5 1/2	34x5 1/2	34x5 1/2	B	Wilson, EA	2 1/2	2825	4 1/2 x 5 1/2	36x4	36x7	W	Wisconsin C	1 1/2	2250	4 1/2 x 5 1/2	34x5f	36x6f	W
White, 20	2	3250	3 1/2 x 5 1/2	36x4	36x7	D	Wilson, G	3 1/2	3685	4 1/2 x 5 1/2	36x5	36x5d	W	Wisconsin D	2 1/2	3500	4 1/2 x 6	36x6	36x10	W
White, 40	3 1/2	4200	3 1/2 x 5 1/2	36x5	40x5d	D	Wilson, H	5	4520	4 1/2 x 6	36x6	40x6d	W	Wisconsin E	3 1/2	4000	5 x 6 1/2	36x6f	36x12f	W
White, 45	3 1/2	4500	4 1/2 x 5 1/2	36x6	40x6d	D	Winther, 751	5 1/2	1795	3 1/2 x 5	34x4 1/2	35x5 1/2	I	Witt-Will, N	1 1/2	2750	3 1/2 x 5	36x3 1/2	36x5*	W
White Hick., E	1 1/2	2450	3 1/2 x 5	34x5 1/2	34x5 1/2	W							Witt-Will, P	2 1/2	3250	4 1/2 x 5 1/2	36x3 1/2	36x7*	W	
White Hick., H	1 1/2	2750	3 1/2 x 5	36x5 1/2	36x5	W							Wolverine, J	1	2125	3 1/2 x 5	34x5	34x4	I	
White Hick., K	2 1/2	3350	4 1/2 x 5 1/2	36x4	36x5	W							Wolverine, J	1 1/2	2375	3 1/2 x 5	34x3 1/2	34x5	I	
Wichita, K	1	2300	3 1/2 x 5 1/2	36x3*	36x4*	W							Wolverine, J	2	2640	3 1/2 x 5	34x4	34x7	I	
Wichita, L	1 1/2	2600	3 1/2 x 5 1/2	36x3 1/2	36x5*	W							Wolverine, J	2 1/2	3125	4 1/2 x 5 1/2	36x5	36x10	I	
Wichita, M	2	2800	3 1/2 x 5 1/2	36x3 1/2	36x6*	W							Wolverine, L	3 1/2	4100	4 1/2 x 5 1/2	36x5	36x10	I	
Wichita, R	2 1/2	3000	3 1/2 x 5 1/2	36x4*	36x7*	W							Yellow Cab M21	3 1/2	2050	3 1/2 x 5	32x4	32x4	B	
Wichita, RX	2 1/2	3600	4 1/2 x 6	36x4*	36x8*	W							Yellow Cab M41	1 1/2	2350	3 1/2 x 5	34x4 1/2	34x4 1/2	W	

*2-cyl. †6-cyl. ‡8-cyl. All others, not marked, are 4-cyl. Trac., Tractor. **Canadian made.

F—Fan I Drive. W—Worm. I—Internal Gear. C—Chain. D—Double Reduction. B—Bevel. Four-Wheel. B—External Gear. *Tires—optional. †Pneumatic Tires. All others solid. ‡—Price includes body. \$—Price includes several items of equipment.

are 2-cyl. 18-cyl. 18-cyl. All others, not marked.
are 4-cyl. Trac., Tractor. *Canadian made.
Final Drive: W—Worm, I—Internal Gear.
C—Chain, D—Double Reduction, B—Bevel.
Four-Wheel, E—External Gear. *Tires—optional.
†Pneumatic Tires. All others solid. ††—Price includes body.
‡—Price includes several items of equipment.

Farm Tractor Specifications and Prices

TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Base, Stroke	Fuel	Flow Capacity	TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Base, Stroke	Fuel	Flow Capacity
All-In One...	10-30	\$1975	3	Clim.	4-5 x 6 1/2	GDK	3-4	Gray, 1920	18-30	\$2000	3	Wauk	4-4 1/2 x 6 1/2	Gas.	4
Allis-Chalm. B	6-12	925	2	Leit.	4-3 1/2 x 4 1/2	Gas.	1	Ground Hog	19-31	2000	4	Erd.	4-4 x 6	Gas.	3
Allis-Chalm. G.P.	6-12	850	2	Leit.	4-3 1/2 x 4 1/2	Gas.	1-2	Gt. Western St	20-30	1950	4	Beav.	4-4 1/2 x 6	K.	4
Allis-Chalm. L	12-20	1495	2	Mod. W	4-4 1/2 x 5 1/2	Gas.	2-3	Hart-Parr, 20	20	905	4	Own	2-5 1/2 x 6 1/2	K.D	3
Allis-Chalm. M	18-30	2150	4	Own	4-4 1/2 x 6 1/2	GorK	3-4	Hart-Parr, 30	30	1595	4	Own	2-6 1/2 x 7	K.D	3
Allis-Chalm. N	10-18	875	4	Own	4-4 1/2 x 6 1/2	G.K	4	Heider, 30	9-16	1170	4	Wauk	4-4 1/2 x 6 1/2	G.K	3
Allwork, 2-G	14-28	1875	4	Own	4-4 1/2 x 6 1/2	GorK	3	Heider, 40	12-20	1395	4	Wauk	4-4 1/2 x 6 1/2	G.K	3
Allwork, 3-C	14-28	1675	4	Own	4-4 1/2 x 6 1/2	GorK	3	Heider, 50	6-10	1050	4	LeR.	4-3 1/2 x 4 1/2	Gas.	1
Andrews-Kin. D	18-36	2500	4	Clim.	4-5 x 6 1/2	GorK	4	Hicks	20-30	1185	4	Wauk	4-4 1/2 x 6 1/2	KorK	3
Appleton	12-20	1500	4	Buda	4-4 1/2 x 5 1/2	G.K	2-3	Huber Light 4	12-25	1185	4	Wauk	4-4 1/2 x 6 1/2	GorK	3
Are, 1921	3-5	550	4	Own	1-4 1/2 x 5 1/2	G.K	1	Huber Super 4	15-30	1885	4	Midw.	4-4 1/2 x 6	Gas.	3
Aultman-T.	15-30	2200	4	Clim.	4-5 x 6 1/2	G.K	4	Illinois, Super	18-36	2500	4	Clim.	4-5 x 6 1/2	G.K	4
Aultman-T.	22-45	3850	4	Own	4-5 1/2 x 8	G.K	6	Imperial, E	40-70	5000	4	Own	4-7 1/2 x 9	G.K.D	10
Aultman-T.	30-60	5000	4	Own	4-7 x 9	G.K.D	8	Indiana, F	5-10	1000	2	LeR.	4-3 1/2 x 4 1/2	Gas.	1-2
Automot. B-3	12-24	1785	4	Herd.	4-4 1/2 x 5 1/2	Gas.	2-3	International, A	8-16	900	4	Own	4-4 1/2 x 5	G.K.D	2
Avery, SR, Cul	5-10	...	3	Own	4-3 x 4	G.K	2	International, B	15-30	1750	4	Own	4-4 1/2 x 5	G.K.D	4
Avery, Cult-C	5-10	...	3	Own	4-3 x 4	G.K	2	J-T, N	20-40	3485	2	Chief	4-4 1/2 x 6	G.K.D	3-4
Avery, B	5-10	...	4	Own	4-3 x 4	G.K	2	Klumb, F	16-32	1650	4	Clim.	4-5 x 6 1/2	Gas.	4-6
Avery, C	8-16	...	4	Own	4-3 x 4	G.K	2-3	Knudsen, 1920	25-45	2500	4	Own	4-5 x 9	Gas.	4-6
Avery, D	12-20	...	4	Own	2-5 1/2 x 6	G.K.D	2-3	LaCrosse, M	6-12	900	4	Own	2-4 x 6	G.K	1
Avery, E	12-25	...	4	Own	4-4 1/2 x 6	G.K.D	3-4	LaCrosse, G	12-24	1250	4	Own	2-6 x 7	GorK	3
Avery, F	14-28	...	4	Own	2-6 1/2 x 7	G.K.D	3-4	Lauson, 1	12-25	1495	4	Midw.	4-4 1/2 x 6 1/2	GorK	3-4
Avery, G	18-36	...	4	Own	4-4 1/2 x 6	G.K.D	4-5	Lauson, 2	15-25	1685	4	Beav.	4-4 1/2 x 6	GorK	3-4
Avery, H	25-50	...	4	Own	4-4 1/2 x 6	G.H.D	5-6	Lauson, 3	15-30	1985	4	Own	2-6 x 6 1/2	GorK	2-3
Avery, I	45-65	...	4	Own	4-7 1/2 x 8	G.K.D	8-10	Leader, N	16-32	1985	4	Clim.	4-5 x 6 1/2	G.K	3-1
Bates	15-25	...	4	Own	4-4 1/2 x 6	Ker.	3	Leader, GU	18-35	2775	2	Clim.	4-5 1/2 x 6 1/2	G.K	3-1
Bates Mule, H	15-25	...	4	Midw	4-4 1/2 x 5 1/2	Gas.	3	Leonard, E	20-30	2530	4	Buda	4-4 1/2 x 6	G.K	3
Bates Mule, F	18-25	...	2	Midw	4-4 1/2 x 5 1/2	Gas.	3	Liberty, A	40-32	2475	4	Clim.	4-5 x 6 1/2	G.K	4
Bates Mule, G	25-35	...	2	Midw	4-4 1/2 x 6	Gas.	3	Linn, HAJ	18-32	4500	4	Cont.	4-4 1/2 x 5 1/2	Gas.	4
Bea	8-16	...	1	Own	1-3 1/2 x 4 1/2	G.K	1 1/2	Little Giant, B	60	5100	4	Wauk	4-5 x 6 1/2	Gas.	6
Boeman, G	2-4	315	4	Own	1-3 1/2 x 4 1/2	G.K.D	1 1/2	Little Giant, A	16-22	2200	4	Own	4-4 1/2 x 5	K.	4
Best	30	...	2	Own	4-6 1/2 x 6 1/2	G.K.D	8-9	Lombard, 1	25-35	3300	4	Own	4-5 1/2 x 6	K.	6
Best, 1921	60	...	2	Own	4-6 1/2 x 6 1/2	G.K.D	8-9	Lombard, 2	85-150	...	2	Own	6-5 1/2 x 6 1/2	Gas.	16
Boring, 1921	15-30	1850	3	Wauk	2-6 1/2 x 7	GorK	3-4	Lombard, 3	50	...	2	Own	4-4 1/2 x 6 1/2	Gas.	0-10
Burn-Oil, 1921	15-30	1650	4	Wauk	2-6 1/2 x 7	Ker.	3-4	Magnet, B	14-28	1875	4	Wauk	4-4 1/2 x 6 1/2	K&G	1
Capital	15-30	1000	2	Own	4-4 1/2 x 6	Gas.	3	Master Jr.	5-10	585	4	LeR.	2-2 1/2 x 4	Gas.	3
Case	10-18	1090	4	Own	4-3 1/2 x 5	GorK	2	Merry Gar 1921	2	230	2	Evin	1-2 1/2 x 2 1/2	Gas.	1
Case	15-27	1690	4	Own	4-4 1/2 x 6	GorK	3	Minne, All-P	12-25	1200	4	Own	4-4 1/2 x 7	GorK	3
Case	22-40	8100	4	Own	4-5 1/2 x 6 1/2	GorK	4-5	Minne, Gen.P.	17-30	1850	4	Own	4-4 1/2 x 7	GorK	3-4
Caterpillar T11	25	...	2	Own	4-4 1/2 x 6	Gas.	4	Med. Duty	22-44	3300	4	Own	4-6 x 7	GorK	5-6
Caterpillar T16	40	...	2	Own	4-4 1/2 x 6	Gas.	4	Mohawk, 1921	35-70	4800	4	Own	4-7 1/2 x 9	GorK	8-9
Centaur	5 1/2	455	2	NWay	2-2 1/2 x 4 1/2	GorK	1-9	Moline Univ D	8-16	785	4	Light	4-3 1/2 x 4 1/2	KorK	1-2
Chase	12-25	2100	3	Buda	4-4 1/2 x 5 1/2	GorK	2-3	Moline Univ D	9-18	990	2	Own	4-3 1/2 x 5	Gas.	2-3
Chicago 40	15-27	2500	4	Own	4-4 1/2 x 6	Gas.	4	Moline Ord.	9-18	1075	2	Own	4-3 1/2 x 5	Gas.	2-3
Cletrac, W	12-20	1495	3	Own	4-4 x 5 1/2	G.K.D	2-3	Motor Macult.	1 1/2	195	2	Own	1-2 1/2 x 3 1/2	Gas.	3 1/2
Dakota 4	15-27	1750	3	Dom.	4-4 x 5 1/2	Gas.	3	Motex	15-30	2250	4	Buda	4-4 1/2 x 6	Gas.	3-4
Dart, B.J.	15-30	2100	4	Buda	4-4 1/2 x 6	Gas.	3-4	NE, 1	3-6	425	4	Own	2-3 1/2 x 4	Gas.	1/2
Depue, A	20-30	2500	4	Buda	4-4 1/2 x 6	Gas.	4	NE, 2	3-6	425	4	Own	2-3 1/2 x 4	Gas.	1/2
Dill, D	20	2140	4	Cont.	4-4 1/2 x 5 1/2	Gas.	3	Nichols-Shap.	20-42	3100	4	Own	8 x 10	GorK	3-6
Dill, R.W.	20	2980	4	Midw.	4-4 1/2 x 6	Gas.	3	Nichols-Shap.	25-50	3460	4	Own	9 x 12	GorK	4-7
Do-It-All	-7	595	...	Own	1-4 1/2 x 5	Gas.	...	Nichols-Shap.	15-25	1775	4	Wauk	4-4 1/2 x 5 1/2	GorK	4
Eagle, F	12-22	1390	4	Own	2-7 x 8	GorK	3-4	Nichols-Shap.	20-40	2475	5	Wauk	4-5 x 6 1/2	G.K	4
Eagle, F	16-30	1450	4	Own	2-8 x 9	GorK	4-5	Nichols-Shap.	12-20	1485	4	Own	2-6 x 8	K.D	3
E-B, AA	12-20	1445	4	Own	4-4 1/2 x 5	GorK	3	Nichols-Shap.	16-30	2285	4	Own	2-7 x 8	K.D	4
E-B, Q	12-20	925	4	Own	4-4 1/2 x 5	GorK	3	Nichols-Shap.	20-40	3175	4	Own	2-8 x 10	K.D	5-6
E-B, Q	16-32	2000	4	Own	4-5 1/2 x 7	GorK	4	Nichols-Shap.	30-60	4590	4	Own	2-10 x 12	K.D	8-10
Evans	18-30	2000	4	Buda	4-4 1/2 x 6	G.K	3	Nichols-Shap.	21 1/2	395	4	Own	1-5 1/2 x 3 1/2	Gas.	3 1/2
Fagool, D	9-12	1525	4	Lyc.	4-3 1/2 x 5	Gas.	2	Nichols-Shap.	15-30	2250	4	Beav.	4-4 1/2 x 6	GorK	3-4
Farm Horse, B	18-30	1885	4	Clim.	4-5 x 6 1/2	G.K	3-4	Once Over T-6	12-25	3000	4	Strn	4-4 1/2 x 6	Gas.	2
Farquhar	15-25	...	4	Buda	4-4 1/2 x 6	G.K.D	3-4	Parrott, K	15-30	1950	4	Pitt	4-4 1/2 x 6	G.K	3
Farquhar	18-35	...	4	Own	4-6 x 8	G.K.D	4-5	Peoria, L	12-25	1758	4	Clim.	4-5 x 6 1/2	G.K	3
Farquhar	25-50	...	4	Own	4-7 x 8	G.K.D	6-7	Pioneer, C	18-36	...	4	Own	4-5 1/2 x 6	G.K	10
Fitch, 4	20-35	...	4	Clim.	4-5 x 6 1/2	G.K.D	3-4	Pioneer, C	30-60	...	4	Own	4-7 x 8	G.K	10
Flour City	20-35	...	4	Own	4-5 1/2 x 6	Ker.	4-6	Planet Jr.	5-10	950	2	LeRoi	4-3 1/2 x 4 1/2	Gas.	1
Flour City	30-50	...	4	Own	4-6 1/2 x 7	Ker.	6-8	Planet Jr.	15-30	1958	4	Buda	4-4 1/2 x 6	G.K	3-4
Flour City	40-70	...	4	Own	4-7 1/2 x 9	Ker.	8-1	Planet Jr.	15-30	1958	4	Buda	4-4 1/2 x 6	G.K	3-4
Fordson	20	625	4	Own	4-4 1/2 x 5	G.K	2	Planet Jr.	15-30	1958	4	Buda	4-4 1/2 x 6	G.K	3-4
Fox, E	20-40	8100	4	Own	4-5 1/2 x 7	GorK	4	Planet Jr.	15-30	1958	4	Buda	4-4 1/2 x 6	G.K	3-4
Franklin, G	18-30	4080	2	Clim.	4-5 x 6 1/2	GorK	3-3	Planet Jr.	15-30	1958	4	Buda	4-4 1/2 x 6	G.K	3-4
Franklin, C	18-30	3330	2	Clim.	4-5 1/2 x 6	GorK	3-4	Planet Jr.	15-30	1958	4	Buda	4-4 1/2 x 6	G.K	3-4
Franklin, G	18-30	4350	2	Clim.	4-5 x 6 1/2	GorK	3-4	Planet Jr.	15-30	1958	4	Buda	4-4 1/2 x 6	G.K	3-4
Frick, C	12-20	...	4	Erd.	4-4 x 6	G.K	2-3	Planet Jr.	15-30	1958	4	Buda	4-4 1/2 x 6	G.K	3-4
Frick, C	15-28	...	4	Beav.	4-4 1/2 x 6	G.K	3-4	Planet Jr.	15-30	1958	4	Buda	4-4 1/2 x 6	G.K	3-4
G-O, A	14-28	1455	4	Wauk	4-4 1/2 x 6	GorK	3	Planet Jr.	15-30	1958	4	Buda	4-4 1/2 x 6	G.K	3-4
Grain Belt, A	18-36	2150	4	Wauk	4-4 1/2 x 6	GorK	3	Planet Jr.	15-30	1958	4	Buda	4-4 1/2 x 6	G.K	3-4

ABBREVIATIONS: G—Gasoline, K—Kerosene, D—Distillate. Flow capacity varies in relation to operating conditions. Figures are based on 14 in. plows. Engine Make; Beav.—Beaver, Clim.—Climax, Cont.—Continental, Dom.—Domas, Evin.—Evinrude, Herc.—Hercules, LeR.—LeRoi, Midw.—Midwest, Nway.—New Way, Nor.—Northway, Strns.—Stearns, T.C.—Twin City, Wauk.—Waukesha, Weld.—Weldely, Wis.—Wisconsin. *—Crawler type. All others are wheel type.

MOTOR WORLD

for
DEALERS, JOBBERS AND GARAGEMEN

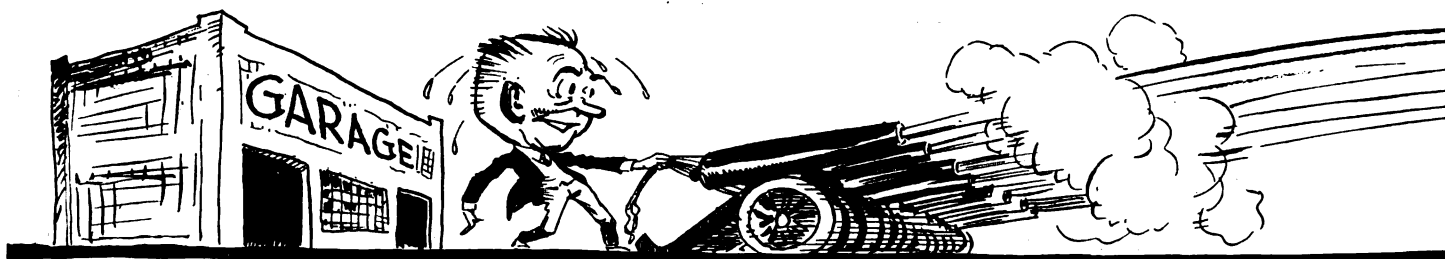
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No. 6

Do You Know This Garageman?





A Jobber Salesman Tells

HOW *The Garageman Can Escape*

By LEON F. BANIGAN

“WE’LL have to begin soon to think up new ways of keeping people from buying automotive equipment.”

Jim Wilson, sales manager for the Wideawake Auto Supply Co. looked up slowly from his desk and levelled a frapped gaze at the smiling features of Jack Miller.

“Yep, it’s getting serious,” the young jobber salesman continued as he flung the strap of a heavy leather bag from his shoulder and let it fall with a thud at Wilson’s feet. “The car owners are getting onto our curves—they’re insisting on getting our items and the garagemen down along the shore are having the devil’s own time ducking them.”

“Look here, Miller,” said the sales manager, “you’re darn good, looks like nothing can keep you below \$100,000 worth of business this year, but darn your buttons, you’ve got to learn that your line of comedy isn’t appreciated in this office. If you’ve anything to say to me be mighty quick about it and get out. But, say, that was a pippin you landed down in young Glover’s place at Seaside Park—his check is in, too, they tell me, for that last \$1,500 order.”

“Um—Yeh—He’s one of the ones that’s worrying me—HE’S SELLING,” Miller mused as he fished his order book from the bag and began tearing out the pink duplicates.

THE sales manager’s first impulse was to rise and unceremoniously throw the young salesman from his office, but his experience with young Miller in the few months he had been out on the road had taught him that when Miller appeared to be extra “nutty” it was just the effervescence of a brand new home brewed selling idea—one generally about 110 proof, and decidedly worth absorbing.

“All right, tell papa,” smiled the sales manager brushing half a dozen catalogs from the corner of his desk and motioning Miller to the perch.

“Sold!” ejaculated the young salesman, as he tore the last order from the book and reached for the sales manager’s buzzer with the heel of his brogue. “I knew that would get me invited in for talkfest with the boss—now why wouldn’t it go just as big with the trade?”

“Sounds reasonable, whatever it is,” answered Wilson.

“you may proceed now, only, for goodness sake, talk United States.”

“Well”—Miller paused to hand the orders to the boy who answered the buzz—“what I’m selling is just this.

“EVER since I took the old ‘fliv’ and started down the shore to smear our goods over the landscape you’ve been sniping me with a lot of stuff about helping the garageman sell more accessories. And I’ve been taking them on my knee, one after another, chucking them under the chin and saying to them: ‘Now, sonny, why don’t you dress up your window like this, and why don’t you display something like this—and here’s how to do this.’

“They all listen to me and some of them even thank me and tell me what a grand fellow I am—but say, the first display I put up, spent half a day doing it, too, is still in old Hardshell’s window. You can’t see it from the street any more, window’s too soiled, and the garage cat has moved into the improved Ford touring kit with her new family.

“You know some of those garage birds make me think of the potato-bugs back on dad’s farm when I was a kid. If it wasn’t for the Paris green he invested in each year to feed them the mortgage would have been lifted and I could have gone to college.

“Then, one summer they were so numerous that dad just couldn’t afford to buy any more poison, and would you believe me?—they starved to death.”

“Yep,” interrupted the sales manager, “I know all about that—I’ve heard salesmen sit in this room and tell me garagemen couldn’t be educated to sell when you were in the stockroom; yes, when you were helping your old man feed the potato-bugs, but—”

“You are my boss but you done me wrong,” chimed in Miller. “Let me up. What I’m selling is the idea that the sales helps thing is pretty, it’s kippy—it’s going home to some of them and making money for them. Fine. To some more it’s not going home so strong. Not so good, but still—” Jack reached for one of the sales manager’s cigarettes.

“NOW here’s what stops my watch. I’ve no quarrel with what we think the garagemen ought to do to sell, or what any of them are doing to try to move the



Those People Who Insist on Buying

ACCESSORIES

goods, but I do wish we could find some way of getting them to *stop doing some of the things they are to make it hard for people to buy accessories*. They've just got to let them buy our goods."

"Meaning what?"

"Meaning this. Before we can get them into the habit of thinking about selling something when a fellow drives up for oil and gas, or for some air, we've got to get them out of the habit of doing things to keep people from driving up."

Jack hopped from the desk and crouched a la Dempsey, tucking his chin behind his shoulder. "We've got to jolt the bad habits out of some of them with the left and then cross the merchandising right. Get me?"

"Just entering the dewy dawn of the idea; proceed," smiled the sales manager.

"Let's go," said Miller, resuming his perch on the desk.

"Here's Exhibit A: Jack Cusick down at Willow Point. Fine new stucco front garage. Built last spring. Nice big accessory store with big display windows on the corner. Contents of the windows: One pair of greasy overalls, an old cap, half a dozen discarded hack-saw blades and 5728 dead flies. There's a streak of oil an inch thick from the door of the accessory store to a point eight feet north of the pump on the curb. A greasy, surly, apprentice serves gas and hands the customer his change packed in gear grease. If somebody insists on buying a spark-plug the kid goes to the garage door and yells: 'Hey, Jack, this guy wants to know have we any plugs.'

"If a customer gets past that defense and buys an item he deserves a Croix de Guerre.

"Exhibit B: Joe Hammer's place over in Pine Terrace. He calls it the Ideal Garage. On a busy road. Garages forty-two cars for summer guests at the Pine Terrace hotels and keeps three gasoline pumps going on the curb. But some of the customers are in such a hurry to get away they forget their change. There's two long benches running along the front of the place and on them are always perched ten to fifteen chauffeurs. Some of them chirp and flirt at the women folk in customers' cars, while the others keep the air blue with their obnoxious repartee.

"How long could you brave that barrage if you drove up with the wife and family?

"NEXT comes Exhibit C: Jake Pool's place in Crystal Glens. Another typical resort garage. And would you believe it, some people do succeed in buying accessories

and tires, and getting some repairs done, in spite of the fact that Jake has his place plastered with signs that all mean 'Keep Out.' Over the door where you drive in there's a big blue and white sign five feet long and a couple deep. It says: 'No Smoking.' Just inside there's another that cries out: 'Terms Strictly Cash.' Off to one side another shouts: 'Not Responsible for Robes and Tools Left in the Cars.' And, over on the other side, there's one: 'Not Responsible for Losses by Fire or Theft.' Tucked in the window of the office door there's a postcard printed in big red letters, 'Don't Swear, It Sounds Like Hell.'

"Can you imagine what is the average opinion a customer gets of Jake after reading those signs?

"Exhibit D: There's Lew Hollister's shop over in Ocean View Park. Lew has a sign over the door, 'Runswell Automobile Agency.' When I went in last week Lew had twenty-four cars stored and four or five knocked down for repairs. Three mechanics were busy on them. Lew was up on a step-ladder with rubber boots and a hose washing the top of a car. There were two Cadillacs, a Packard and a Buick tooting for attention at the gasoline pump.

"Lew," I said to him, 'there's about \$10 business out at the pumps, and nobody to collect the money.' 'Let 'em wait,' growled Lew, 'the kid'll be back in a minute.' Ducking the stream from Lew's hose I edged up to the ladder and yelled over the din of the horns: 'How are Runswell cars selling?'

"Got three of them upstairs for anybody that wants them," shouted Hollister, 'but I haven't time to waste selling cars or anything else, I'm too damn busy.'

"DO you get the picture? A garage proprietor up on a ladder, rubber boots and all that—what do they call it, atmusfeer?—and clean, easy money going begging out in the sunshine. Why, if I were a cartoonist, I'd—"

"Plenty—don't say another word," interrupted the sales manager. "I'm sold.

"Go over and yell at my stenographer all you've told me and all the other exhibits you've in your bag. We'll get the 'left-jolt' out in our next bulletin. It will be entitled: 'How to Keep People from Buying.' It will work in nicely with our sales helps stuff, and—"

"Say, boss," said Miller, climbing down from the desk and reaching for another cigarette, "did you O. K. my flivver upkeep bill? I'm taking the girl over to the beach in the morning and I need the jack."

You Could Hold a Summer Sales Promotion Week

This Story Tells How a Kansas City Distributor Attracted Hundreds to His Salesroom and Stimulated Sales with an Unusually Clever Campaign—Read How He Did It

FROM time to time we hear that "a few motor car dealers report good volume." One of these "few" is the W. C. Howard Motors Co., distributor of Lexington and Hupmobile in Kansas City.

There's a reason for the constant movement of cars from the Howard establishment. The company "keeps something going on."

Many periods have occurred in the past few months during which business was dull, in the motor car industry. It was in such periods that the Howard company put on its special events; and business was not dull there.

It didn't seem to make any difference whether the company had cars to deliver or not—whether the "conditions were right" or not. The company was active in promoting sales; and selling.

RIGHT at this point in the story, let's comment on one of the reasons, ascribed by many observers, for the "spotty" condition of trade, whatever the line handled. This one reason is that too many retailers have lacked initiative to undertake promotion work. In dry goods, women's wear, clothing, music, hardware, jewelry, and automobiles, there are retailers and wholesalers who have had good business while others have had bad business. Those who have gone ahead have been the ones who had sufficient confidence in themselves, and sufficient mental and moral energy to drive ahead. A vast number of retailers have used promotional methods during the past year only when somebody put the means for promotion into their hands, or under their noses. Too many haven't taken the trouble to study their own merchandising problems, and devise methods for themselves.

The Howard company has not waited for somebody to tell it what to do. It has thought of the thing to do—and has spent good money to do it.

Sometimes it has got the money back promptly. Sometimes the expenditure has been investment for the immediate or more distant future.

In June, for instance, the promotion was largely investment in the future, because the company did not have cars enough in Kansas City to return profit to cover expenses of its campaign. And the few cars it did have were sold so quickly under the pressure of its campaign that it is now distressed by the appeals of customers to hurry up deliveries.

"Distressed" is good! But the agony is not killing anybody.

The Howard company does not wait for somebody to spur it to a special promotional event.

The company wanted to put on a "Hupmobile Week." Well, it put on such a week. What difference whether



The winner of the first prize in the parade by Hupmobile owners in Kansas City. Owners to the number of 129 joined in this parade, and were guests of the company at a picnic afterward

the manufacturer was conducting a "national week" or not? The Howard company made the thing strong enough in Kansas City, so that the people of this territory thought it was a national week.

And the event for Hupmobiles was many times as effective as nine-tenths of the "weeks" put on by dealers half-heartedly and with material furnished by the factories.

The Howard company thought out all the details, applying the idea to Kansas City, to the summer of 1921, to its own owners and prospects and future prospects, and to its own

facilities for display and entertainment.

This "week" was in the nature of a jubilee with two hips and a hurrah. There were two classes of people upon whom it was sought to make an impression, and a very definite keynote to the advertising program. The two classes were those who owned Hupmobiles and those who did not own Hupmobiles. The keynote was seasonal—the touring season.

In the first place, "Hupmobile Week" was designed quite as much to enliven the enthusiasm of Hupmobile owners as to awaken enthusiasm of prospects. It was designed to "sell" Hupmobiles over again to owners, and to sell them to non-owners.

The program had a still deeper significance. It was designed to bring the whole body of Hupmobile owners in Kansas City into celebration, to demonstrate the popularity of the car. It was not enough that the company should be telling the public of the virtues of Hupmobile; it was necessary that the local owners of Hupmobiles should be showing their gratification and pride in driving such a car.

A real "Hupmobile Week" would be a week in which Hupmobile owners participated.

And they did certainly participate in Kansas City!

The week began Saturday, June 25, with a parade through the downtown streets. There were 129 Hupmobile owners in the parade, each with a carload of family and friends; and most of the cars were elaborately decorated. The decorative feature was attained through the offering of prizes for the handsomest, the prettiest, and most striking, and the funniest car. Be-

cause of the varied nature of the displays, and the care and expense involved in the decoration of the cars by the owners, the parade attracted much attention and created a deep impression.

The second feature of that first day was a picnic at Swope Park. Many owners who could not join the parade

prospects. Why?

The display had three features that should be carefully noted:

1—It showed a scene in which everybody was interested in June.

2—This scene was "alive."

3—It contained, as the hook-up of the picture to the commodity to be sold, a Hupmobile that had twice made

slept there. One slept in the tent—another in the motor car, on the bed which the owner himself uses on his tours.

These campers were the floor salesmen of the company; and friends. They met prospects coming into the salesroom, and took them into the camp to discuss the car. At night



The camp window, feature of Hupmobile Week staged in Kansas City by the W. C. Howard Motors Co. Day and night, men lived in this camp. The car is one which has made two round trips between Kansas City and Los Angeles—giving a selling point to the inspiration of the window picture towards outdoor life.

went to the park in the late afternoon. The company provided the "eats," sandwiches, cake, the drinks, ice cream and incidental refreshments of special interest to children. The luncheon was served cafeteria style in the park.

The attendance had resulted only from personal invitations sent by mail to each owner in Kansas City.

On Monday the north half of the Howard sales floor displayed a scene which was the central idea in the selling effort of the week; and this scene was continued until Saturday. It was a camping scene—reflective of the fact that at this season, above all others, people are eager to get outdoors to live as much as possible in the "open." This display was aimed incidentally at Hupmobile owners, but was chiefly the feature attracting interest of new prospects. And it certainly attracted them! Literally hundreds of people stopped their cars on McGee Trafficway and got out to inspect the window closely. And there was not one who did not gaze with a smile, and most of them gazed wistfully at the display. Literally scores of live prospects were interviewed by the alert salesmen. *The fact that the last Hupmobile in stock was sold before the week was half over shows that some of these prospects were live!*

This display sold cars; and got many

the round trip between Kansas City and Los Angeles, and was about to start on its third round trip.

It was a real camp. Soil nearly a foot deep covered the salesroom floor. Real sod covered the soil; a road, a real road, wound through the picture. Around the walls were set up "wings" secured from a theater, showing water, trees, and in the distance, mountains. Drop curtains added to the effect.

Branches, and small trees, were disposed in the angles.

On one side of the road stood the Hupmobile, with its placard giving its touring history.

On the other side of the road was the camp. There was a tent, two campfires, tables, chairs, a woodpile. Fires were burning, coffee boiling, smoke rising from fried bacon—electric grills being used not only for the heat for cooking, but for the glow to give the effect. Fishing tackle, canoe paddles, and other incidentals were strewn around.

This was the picture. Fine enough in itself.

But it was given life.

Every hour of the day and night two or more men, in camp costume, were living in this camp. They lolled about in the chairs and on the grass, reading, smoking, talking, playing cards, fixing their equipment. They cooked and ate meals there. They

they of course conducted their "show" without interruption.

The Party

Thursday evening, midweek of the event, the Howard company gave a party to owners and prospects in the salesroom. The south half of this room had been cleared for dancing; other sections of the establishment, including service department and offices and used car department, were devoted to refreshments and parlors.

A band played from 8 to 12 o'clock. Two vaudeville acts from a local theater added to entertainment. There were candy wheels and similar amusement devices.

Hupmobile week was the week of the "big rains" in Kansas City. The night of the party was that of the heaviest storm of the week. But more than 1000 men, women and children were guests of the Howard company that night. The police traffic squad assisted in disposing the cars of visitors, which were parked for two blocks in every direction.

"We hoped to arouse the good will of owners and create a friendly spirit on their part toward us," said Mr. R. W. Conant, wholesale sales manager, who conceived and executed this "week." "We got that result, far beyond our expectations. And we also secured a list of live prospects that makes us wonder why people say the public is not ready to buy."

What Makes a Jobber Organization Grow?

A Manufacturers' Sales Agent Answers the Question with Some Pertinent Observations About Jobber Salesmen, Buyers and Jobbers' Customers

Extracts from an address by B. M. Asch of Asch & Co., Manufacturers' Sales Agent, before the jobber organization of Joseph Straus & Co., Buffalo, N. Y.

WHAT makes a house grow? Of course the financial man will tell you finances. The buyer will tell you purchases. And the salesman will tell you salesmanship. The salesman has the better end of the argument, construing salesmanship in a large way; because it isn't only the actual orders that you men book on the road that constitutes salesmanship. A good buyer is a mighty good salesman. His job is to buy merchandise and at the same time sell his house to the concern from whom he is buying merchandise. If you haven't

a good buyer, who is at the same time a good seller, I don't care how much money your house has, it never can be successful. As far as your financial man is concerned, there isn't a concern in the world that is ever really successful, and at the same time progressive, that doesn't have to borrow money. And unless your financial man is a good salesman and is able to sell his concern to his banker, he has very little opportunity of getting the money that he actually needs. Selling the banker paves the way for bigger business.

WHEN you look at this in a large way, you come to the conclusion that the main asset of all business is salesmanship. Salesmanship has to be divided into a great many heads, and it is remarkable how little thought people that haven't the title of "salesman" attached to them give to salesmanship.

To what class of trade are the jobbers compelled to sell? Primarily to garages. Now, let's take this garage man as he was constituted years ago. What was he? In most cases, a mechanic who got tired of working for a boss, thought he could go into business for himself, thought all he had to do was to open up in an old building of some kind, put out the sign "Garage," and the unsuspecting public would allow him to repair a car of which he actually knew nothing. This man spoiled a great many good automobiles and collected money for it—sometimes. As a rule he had most of his money spent before he was able to pay for the parts that he had put into the car. By the time the salesman got around to collect the money, and to sell him another bill of goods, he found Bill Smith where Tom Jones had formerly been. Nobody knew Tom Jones' whereabouts, and the house was stuck.

Naturally, every new industry has to go through this process. Gradually the credit men tightened the screws. A good many of these fellows had to buy for cash. Slowly we got a better class of men into the business. We got in a class of men that took real pride in the work they turned out. And when we once reached this point, we commenced to build the foundation for a substantial, ever-growing industry. A number of these garage men took on agencies for cars. There were any number of automobile manufacturers that were mighty

glad to have in some of the better towns an agent that sold their cars, and they would let a dealer like this have a car on consignment. The result is a great many automobile manufacturers went broke. These garage men had a good time traveling around in cars that didn't belong to them. All they had to supply was the gasoline and tires, and whatever repairs were necessary, and for this class of car they were quite frequent.

When Men Took Pride in Their Work

When once the men in our trade took a pride in the work they turned out, we had a class of trade that needed better tools with which to perform this work. The man who takes pride in his work is usually the man who does a considerable amount of thinking. Now, when a man begins to think, there is a good possibility of his developing into a good business man. In addition to this, necessity has caused a great many of these men to become business men. They stopped giving credit. They didn't let a car that they had worked on go out until they got their cash. Our good friend Ray Sherman has done wonders toward educating the garage man along these lines. When a man received his cash for the work he did, he was able to pay for the merchandise he bought. He was able to accumulate a bit of surplus. He found that the jobber was his friend, and that the jobber was willing to extend to him a certain amount of credit; and on this credit he was able to gradually equip his garage with the various equipment that he needed. Of course, no man who ever went into this business realized the actual amount of equipment that was necessary in order to run a first-class

garage. He would start in with a real jack. Then he would next buy a press. Before you knew it he had a drill press, and pretty soon a lathe. Some of the larger shops bought planers. An electric drill became an absolute necessity. No man could run a first-class garage without an automatic air compressor. And he became as proud of his plant as any manufacturer, which, in truth, he was. And I want to tell you fellows that when a garage is well equipped, the credit risk is first class. A man who takes a pride in his work, takes pride in keeping his account right up to date. It is with this class of trade that your principal work is done.

The principal essential of salesmanship is work. I don't care how good a salesman you think you are, if you are not willing to work, you will never be successful. The man who is afraid to put in the time, the man who is afraid to carry samples or catalogues or photographs, or whatever is necessary for his particular line of business, is never going to get anywhere. There are three ways of selling, and while some few years ago business men were firmly convinced one of the greatest evils had been eliminated, unfortunately since prohibition, rum has come back as a selling asset in alarming proportions. Many a salesman convinces his customer that the customer needs a drink, and the salesman gets it. Good buyers are fully conscious that in the end he pays the bill.

Fellows, if you want to do a good day's work, you must have a good night's sleep. You can't dissipate all night and then do a good day's work. Not only must your body be charged with energy, but your brain must be right on the job. I never yet saw the man who stayed successful who did not take care of himself. Of

course, while you are young you have reserves on which to draw, but how many of us want to quit before 35?

Your reputation for doing things right goes much further than your rep for being a good fellow! You want to put your personality into your selling. Learn to know your good points. Study yourself as though you were an outsider. Play up your good points. Make them stand out. Your real job is to make the other fellow know you and be glad to see you.

The next proposition is that a man must know what he is talking about. I want to know how on earth you can sell Bill Jones a Weaver Press if you can't tell him how it operates and what it does. What excuse have you for selling a man an article like "X" Liquid unless you know absolutely how it operates and why it operates. You can't sell anything unless you are convinced that the article is right. And you can bet you last dollar, that your concern would not have bought the item if it weren't right.

I know what you think of your buyer, but you are all wrong. All salesmen think their buyer doesn't know how or what to buy, and that they could do a lot better, but they are always wrong. Ninety-nine salesmen when given the buyer's job fall down. There are any number of items a year that are shown to your buyer that you are not given to sell. I venture to say that Mr. Ball interviews at the rate of 100 salesmen a week, making a gross total of somewhere around 5000 a year. If he were to buy all the merchandise that these men offered him, he would need a territory about four times the size of the United States in which to sell it, and pretty much the population of a town like Tonawanda to do the selling for him. But he examines these items and picks out what he considers the best item in each line. Sometimes not the finest article, but the best as he sees it, from a standpoint of value, and best suited for his trade.

If We Had This Item

One of the worst things the buyer has to contend with is the salesmen coming in and saying, "If we had this item we could sell it." "If we had that item we could sell it." "There is a tremendous call for this item." Well, to be perfectly frank with you, the man who comes in with this kind of story and comes in regularly, will never make a salesman. Of course, you run across items from time to time for which there is a big demand. It is up to you to report this to the buyer. But you want to discriminate. You want to find out if your customer, in buying this article, bought an article that was really worth while or whether he got stung. Did he buy it through some other jobber, or did he buy it through some high-powered specialist who figures on making one sale and never coming back, and could your house make a profit if they handled it? If the order that you have taken from your customer is the only order you are ever going to get from him, you haven't sold him anything. You have made a little tem-

porary money, but you must sell, in addition to your merchandise, and sell much more strongly than you have sold your merchandise; first—yourself; secondly—your house!

I don't want Mr. Ball to get the idea from what I am going to say next that I want to hire any of you men, not that I wouldn't like to, but we haven't any

If You Read This Story— and You Should—

YOU'LL find on these pages some mighty interesting observations on what makes the success-



B. M. Asch

ful jobber and automotive equipment salesman.

It is an intimate discussion of merchandising by B. M. Asch, Manufacturers' Sales Agent, of the things, big and small, that help make business for the jobber and his salesman.

Let's read it right now.

opening right now; if there is any man that hasn't 100 per cent confidence in this house, if he is staying here because he hasn't another job, he is doing not only his house, but himself, a tremendous injustice.

It is not enough to know about your house that Mr. Straus is a regular fellow; that he is an honest man, goes to church regularly, and always has enough money on hand to pay you your salary. It is not enough to know that Mr. Ball is a fine chap; that he does everything in his ability to help you fellows. That is only part. What you have to know is how your house does business. You must know—and you probably do—that your office is a well run office; that your bookkeeper doesn't make mistakes (of course, if he doesn't make a few mistakes he is not a good bookkeeper), but you undoubtedly know that the accounts with your

particular customers are in first class condition. You must know that your shipping clerk gives your orders prompt attention. That is what I call having confidence in your house. When you once have this confidence, it is a mighty small matter to sell the merchandise that is handled by your house.

As far as we are concerned in our business, we don't spend half as much time selling merchandise, as we do selling the house. I haven't actually written an order in three years; but I am out selling goods all the time. I never miss an opportunity to sell Asch & Co., Inc.—of which concern I happen to be president—and the various factories whose merchandise we handle. And I want to tell you boys right straight, that if I didn't have faith in the factories whose merchandise we are selling, we wouldn't sell the merchandise! We made it a rule years ago—and your Mr. Straus, and your Mr. Ball know it—that if any of our factories ever fell down on their guarantee, we would stand back of the guarantee; and we wouldn't be able to stay in business long if we sold the class of merchandise that could not be backed by the guarantee of the factory itself.

Have Faith in Your House

You must have the conviction that what your house says is right. When you have an argument with your customer, don't come in and complain to the house, but investigate first whether the customer has a just claim or whether he hasn't a just claim. A good many customers, especially when they owe you money, kick. The more money they owe you, the harder they kick. If the bill is old, they kick still harder. I think you will all find that the customers who pay their bills promptly are the ones with whom you have the least trouble.

Then there is another thing; our business is an especially attractive business. Many people go into the automobile accessory business, and think that this means riding around in cars continually. Of course, up to a few years ago, everybody believed that the automobile business was a pleasure business. You and I know that there are in the United States over 2,500,000 cars that are used almost exclusively for business. Salesmen, inspectors, collectors, canvassers, physicians, architects—why, you can go through the whole line of industry—and find that without the automobile business would slow down in this country of ours at least 50 per cent. Anybody who enters the automobile business thinking it is a sinecure makes a tremendous mistake. The sooner he disabuses himself of this idea, the better he will be off; and if he can't be disabused of this idea, the sooner he gets out of our industry, the better the industry will be off.

I want to come back to the merchandise that your buyer has bought. You men come in here every week. What do you do when you are in? Fight with the bookkeeper about your commissions? Of course not. You know you get all the commissions that are due you. Fight with the buyer about the merchandise that he ought to buy and doesn't buy?

Why he is too busy to listen to you for more than 10 or 15 minutes. Instructions from the sales manager take up at most an hour. Swap stories? What you want to do is find out what you have on your shelves, make a note in your book of what you are overstocked on, make mental notes of the merchandise on which you can give prompt service; sell the merchandise that is in stock, then you can give your customers real service. As an example. Here is your customer who wants Lyon Bumpers. You know you have Halladay in stock. Try to sell your customer Halladay Bumpers. It does two things. It gives your customer the merchandise he wants immediately. It turns some of the merchandise that is on the shelves into cash. It is a very important problem, this merchandising of what is on the shelves. Merchandise that is good to-day may be absolutely worthless next year. Styles change. Ideas change. These millions of inventors are working on better methods. You must get rid of the stock that is on the shelves so as to give the firm an opportunity to buy that merchandise which is going to take the place of that which is on the shelves now, and get rid of same at a profit. The average article in the automobile line is stable for about two to two and a half years. No goods would be made if there weren't a demand for them. No manufacturer would spend the thousands it costs to develop an item unless he received some encouragement that the public wanted same. If the public wants same, it is up to you to sell this merchandise to the dealer so that the garage man will have the merchandise on hand when his consumer calls for it.

I received a letter a few days ago from your firm asking permission to return four Detroit Pumps. Gentlemen, I do not want to presume to find fault with you, but I am sure one of you could have sold these pumps. On this particular item somebody is going to lose money. Within the past three weeks, the list price has been reduced \$5. The management of the manufacturer has changed, and in order to help the sale, the list was lowered as was also the discount. Yet we have sold hundreds of these—they give excellent satisfaction. I ask you whether it is just fair that because you took no interest, my firm should lose some money?

The Biggest Problem

And then we get the biggest problem that you men have; and that is, making merchants out of your garage man. Your average garage man hasn't time to read the books that you men have an opportunity to read; nor does he even know that books on merchandising are being published for his special benefit. It is up to you to read these various ideas; put them into practice wherever you can.

Your credit man must rely on you for real, honest-to-goodness credit information. Can you honestly recommend as a credit risk a man who has no system of accounting? If you induce your customer to put in such a system, you can rely that as he makes money and knows

how he makes it—where it is—that the leaks are stopped—you will get his business. I know one man who helps his customers on their records. He's top man on the sales force of which he is part, and the credit man told me they never have any difficulty in his territory.

Show your customer how to trim his windows—teach him that an attractive window brings trade—teach him that a clean show case makes sales—let him learn from you that shelves neatly kept are as useful as an extra man behind a counter. Merchandise attractively shown is half sold. Tell him how some other fellow keeps his place clean, thus eliminating waste; when anything falls on a clean floor, it is picked up—on a dirty floor, it is not easily found and is swept up with the rubbish.

Selling at the Curb

Put in the time you must wait to talk to him by waiting on his customers. If they want gas, sell them oil. If it is rainy or foggy, sell them a wind-shield cleaner. If it is muddy, sell step mats. Look the car over. See what might be needed. Take it from the shelves, and try to make a sale. You would be surprised how often you land the bacon. And by this method you can make salesmen out of your customers. Some of you may be too proud to sell goods this way, but men, this is your big job. You are members of the biggest school on earth—the school of industry. Are you content to remain pupils or janitors, or will you join the faculty and teach others what it has taken you years to learn?

You show your customer how to make money—he's your consumer as long as you and your house are square. How

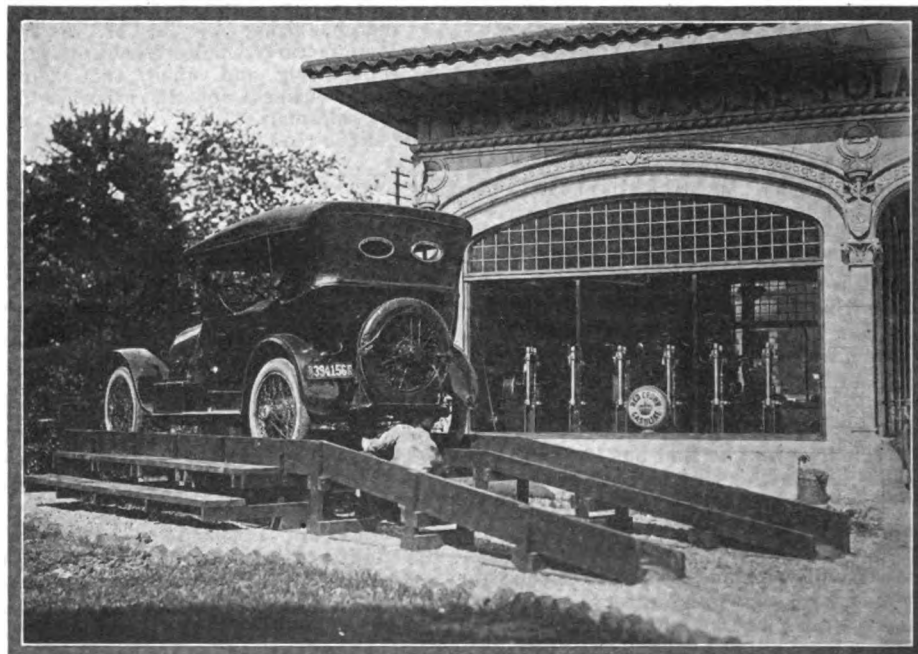
many customers do you think you can serve? Are you not better off with 100 real customers than with 200 accounts who buy more or less from you? Wants are developed. No man wants what he has not seen or imagined! And few of us have imaginations. Advertising could not succeed if it did not stir desire to possess. Show a man what you have. Teach your customer to sell what you have sold him; he'll buy anything you recommend. Give him service. This much abused word can be made to mean something if you will put yourself into your work—teach your customer what you know. You will win out.

I'm nearly through. I have a few more points. There are three senses by which a man buys. He Hears; He Sees; He Feels. Most men want to feel the merchandise. They are half sold when the customer touches the article. You cannot carry very much of your line—but you can get your customer into the habit of coming to the salesroom. If you have him there you have a tremendous advantage. You can show the goods, not pictures, and he is not continually interrupted. I wish I had one cent for every sale that is lost because of interruptions. I'd retire!

One word of caution. Do not allow yourself to get a swelled head. Many a good salesman is ruined because his hat shrinks. You may think you own your trade—well, in a way, you do, but the house has helped put you into this position, and your customer would not have remained loyal without the co-operation of the house.

And remember this: The only business relation that is any good is one that remains permanent.

A New Accommodation for Filling Station Customers



Keen business rivalry has developed this new accommodation for motorists which is to be a part of the service rendered at stations selling a certain brand of gasoline and oil. The company furnishes free service. Motorists drive their car upon the platform and attendants change the oil in the crankcase or transmission

"Delivery-Plus" Plan of Selling Brings Satisfaction to Car Buyer

Customer Naturally Is Gratified When He Finds Purchase Has Merits Not Told to Him by Salesman

By E. D. EDDY

"TO the 'delivery-plus' plan," replied one of the most successful automobile salesmen I know, when I asked him to what he chiefly attributed his good sales volume.

"I believe," he continued, "in *under-selling*. Not price cutting, but the reverse of overselling. I like to leave it to my customer to discover a good point or two which perhaps I didn't tell him about when we made the deal.

"Hot competition sometimes forces me to bring out every feature which would have a bearing upon a favorable decision, but generally I'm able to leave enough good things unsaid to make a 'delivery-plus' possible.

"When a buyer discovers that he's been delivered something more than you promised him, you're pretty sure to be uppermost in his mind the next time he's in the market for a car.

"Very early in my selling career," he went on, "I learned that the making of large and wild statements always brings their days of reckoning.

"If you promise a man his car for late May delivery and it doesn't show up until late June or perhaps early July, your best alibi isn't going to make him have a great degree of confidence in your promises in other things.

"If you promise a performance that wasn't built into the car by the manufacturer, the customer will get a delivery of dissatisfaction and your troubles will not be little ones.

"Lots of our pleasures in this world," he continued, "are in our anticipations. If you have painted a word picture in your customer's mind which has given him keen pleasure in contemplating, he's certainly going to be painfully disappointed if he gets a daub instead of the masterpiece you'd led him to expect.

"The automobile business is peculiarly given to generating enthusiasm. There's something about selling passenger cars which gets under a fellow's selling skin just a bit further than seems to be the case with most other lines.

"I don't think of anything where the temptation to over-

sell is quite so great. Men who, in selling other merchandise, would hew close to the line of truth, seem to lose their sense of sales proportion when on a deal to sell an automobile.

"Of course, and fortunately, too, this isn't by any means universal, but there's enough of it to have made the general public quite chary of accepting the motor car salesman's statements as gospel. The consequence is that all of us are damned for the sins of the few. I've found it quite profitable to 'retard' my enthusiasm.

"When I say 'retard my enthusiasm,' I mean just that," he said, his face sobering.

"I see too many men selling automobiles with the spark too far advanced on their tongues. They are the fellows who make trouble for the rest of us—salesmen, dealers and customers alike.

"Excess of zeal or even misinformation are both sources of some of the grief.

"If one thing more than another has made me some pretty good money selling

automobiles, it is the single fact that I'm backward about taking things for granted.

"Just because the factory representative said certain things were true of the car I was to sell I didn't allow his statements to carry full conviction. Of course, I respect the factory men, but I prefer to know from my own personal observation, examination and study that things are thus and so.

"My word is part of the sale.

"My capital is the confidence people have in my statements and my judgment. A lot of folks have discovered that my selling tongue doesn't go off half cocked.

"They know that when I tell them that the car I'm trying to sell them will do so much on a gallon of gasoline that it'll pretty near do it—that my story isn't built upon some extra favorable test conducted under ideal conditions but is the result of my own checking while driving the model I'm talking about.

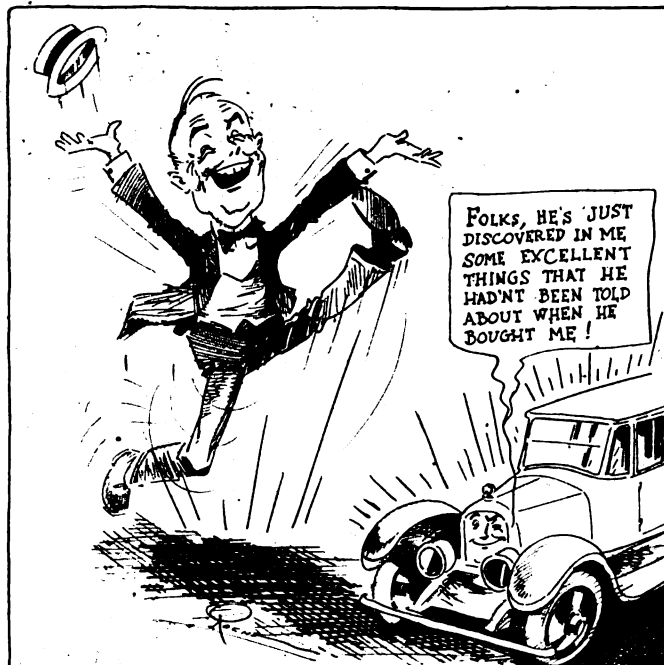
"My customers have decided that I don't deal in hearsay and that I have my imagination under control all the time.

"If I were asked what was the greatest bane of the business of selling automobiles, I think I'd say 'exaggeration.'

"Despite the fact that the automobile and its success constitute one of the mechanical wonder stories of the world, the temptation for excess statement seems to be more or less constant. There seems to be a desire to paint the lily—inexcusable, indeed, for the facts are enough in themselves.

"At all events, I've decided that the 'delivery-plus' idea is good business for me, and I'm quite sure my customers agree with me. By building my sales on that sort of a foundation I'm in an especially strong position with both the firm I work for and also my 'bread and butter'—my customers. And perhaps some day I shall capitalize that confidence through either a partnership or an independent venture."

This man's results are not just "luck." His success is based upon knowledge—from which he reaps confidence.



If you have painted a word picture which has given the customer pleasure in contemplating he's going to be painfully disappointed if he gets a daub instead of the masterpiece you led him to expect

Brick Used to Advantage in These Kentucky Buildings

Here Are a Few of Louisville's Newest Automotive Buildings—They're Building for the Future There

This is the People's Motor Co. building, one of the latest additions to Louisville's motor row. It is a good example of the effective use of brick and steel. It is the home of the Velie distributor.



The use of brick, with very little decorative trim, has produced a sales and service building with considerable character for the Embry-Weir Motors Co., Maxwell and Jordan distributor.

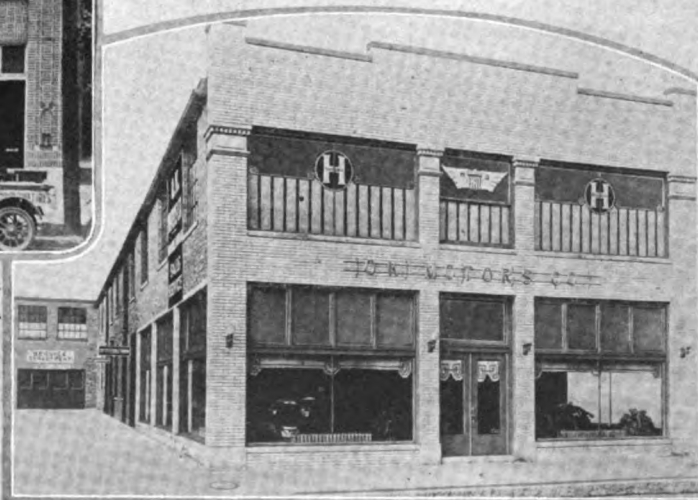


Here is another specimen of brick construction in Louisville that is plain and inexpensive, and yet pleasing in appearance. It was erected recently by the Chandler, Kissel and Cleveland dealer.



In this new factory branch of the Goodyear Tire & Rubber Co. brick construction was used to produce a very pleasing appearance.

This is another fine example of the use of brick with very little granite or other trim. The building has a lot of character and is typical of the better practice in modern automotive building construction. It is the new home of the O.K. Motors Co., Hupmobile and H.C.S. distributor.



Reilly Listens to Tommy Trumbull

A Little Discussion on Forgetfulness and Follow-up

By NEAL G. ADAIR



"WELL, well. Hello, Tommy."
"Hello, C. J."

It was the first meeting of the president and general manager of C. J. Reilly, Inc., since the veteran Sennett distributor turned everything over to Tommy and went out to take a hand in running the gear works.

Reilly settled himself, somewhat strangely, into a visitor's chair and let his gaze wander around the private office and the salesroom and general office visible through the glass partitions on either side.

"H'm, everything—everybody—looks about the same," mused Reilly.

Tommy nodded.

"Er—how are things going?" Reilly asked after a pause.

His successor in automotive affairs in Callawassa smiled and suggested: "Do you want information or am I being interviewed for publication?"

By way of answer Reilly pulled out a pair of choice perfectos which bore the earmarks of Sennett rather than gear works profits, and after Tommy had accepted one in place of his customary cigarette, he resumed the conversation.

"Well, it's like this. Kelly out in the service and Hevitt in the truck end and Snyder in the used car department and the postal service and the fire department and the street department and the Board of Aldermen and everything are functioning about as usual and—well, sometimes the old clock over in the corner seems to be ticking a little more loudly than it used to and yesterday Tony came in with his shoe-shine box and said he wished the gear works would burn down—you know how it is, C. J."

"Yes, I know," said Reilly, "it's the organization that counts. Which reminds me—"

"We've a pretty good bunch out at the gear works, but the other day I asked the young gentleman who has the title of sales something or other—"

Tommy chuckled over the accent on the "gentleman."

"—I asked him to tell me something about the sales follow-up work. It seemed to be absolutely necessary for him to deliver an oration before he sat down to his toasted cheese on crackers or whatever it is one of these one hundred and fourteen and three-quarters pound birds lowers into his ballast hold about noon time. A couple of times I tried to

break through his barrage—finest line of mid-Victorian English you ever heard, I'll give him cred-

it for that—but it was no use. I was a passive participant in a correct imitation of one of these perfect letter writers performing on the dictaphone, only the record was not registering half the time.

"Being a polite man, I thanked him for the discourse and now I've come to get this sales follow-up story from you. I know all about it, of course, but it's a long time since I've been keeping up on the details. I'm pretty familiar with the service follow-up and the good will letters from the house, but I'm a little rusty on just how the salesmen handle their end of the work. And there's some of it, I think, that we can apply to the gear business."

"That's funny," replied Trumbull, "Henry Bennett was in yesterday asking just about the same thing; said he wanted to freshen up their follow-up on the Redman."

Tommy laughed. "You know," he said, "just for the fun of it I asked Bennett who ran for vice-president with Cox."

"And Henry, the old ignoramus, I bet he didn't know," ventured Reilly.

"No, sir, Henry, the old ignoramus," echoed Trumbull, "he didn't know."

Reilly chuckled, as he would have chuckled had Bennett been present, over the discomfiture of his old friend. Tommy turned toward the window, meanwhile vaguely wondering if the girl across the street really liked to wear 'em that way or just thought she had to.

Reilly's chuckle subsided. Plainly, he was thinking.

Finally he burst out, as he saw Tommy's contemplative seriousness broaden into a grin: "Well, confound it, who did run with Cox?"

The Sennett manager gave an Irishman's answer: "How long does the average motor car owner remember who told him, at the club or the Chamber of Commerce or on the golf course, that he was thinking of buying a new car?"

Reilly hitched his chair up closer to Trumbull's desk. He'd find out some time who ran with Cox, but right now—

"It's like this," continued Tommy. "Letters from the house make owners feel that their patronage is appreciated, and good service and intelligent service follow-up work count in good will building and also get some tips on prospects. But every week, in some cases almost every day, our owners who get around a lot are hearing about people, often close friends, who are on the verge of buying new cars."

"If a salesman, calling Owner Jones on the phone or meeting him, apparently by accident, on the way out of the service station, should inquire about his car and its performance and incidentally ask Jones if any of his friends were thinking of buying, Jones might remember what his neighbor Smith said the other day about a bigger car. He might remember IF the salesman saw him within a week or even a month of the day Jones talked with Smith, but he would hardly remember it three months or six months or a year."

"So our salesmen make it a point EVERY MONTH to make some sort of contact with the owners they have sold. It's just a friendly inquiry, with an offer to try to help the customer out of trouble if he seems to have any, but it's almost always possible somehow to introduce the subject of other possible buyers."

"It takes time, sure, but it takes time also to assort registration lists and lists of people with money to buy, which you know we do. And it takes time for Frank Jasper to get a half day once in a while on the golf course, which we want him to do, and to get Anna Jenkins on the phone and ask her how she feels this afternoon, which we also want him to do, because Anna is a mighty fine girl and Frank needs an anchor to windward."

Reilly bit off the end of a fresh cigar, put it back in his pocket and got vigorously to his feet.

"Got to get back, Tommy," he said. "Guess I'll have to fix up a new job for our mid-Victorian friend and see if I can't out-Reilly Reilly in the gear business."



Dollar Ideas

Earn a Dollar

MOTOR WORLD will pay \$1 each for ideas for this department. The ideas should have to do with sales and business management. The idea should be in two parts:

- 1—The problem.
- 2—The solution.

But if you'll get the idea on paper in any fashion whatsoever, we shall be glad to shape it up for you. Do two things:

- 1—Help some other man.
- 2—Make a dollar for yourself.

Window Display Service for Accessory Dealers

A WINDOW display service designed to assist the independent dealer with his display problems and giving a service that will be particularly applicable to the automotive equipment business, will be available after September 1. It will be designed and sold through the Sel-plus Service, 231-241 West 39th Street.

The development of such projects are particularly interesting at this time in view of the demand for more intensive merchandising for products of all kinds.

The Sel-plus Service is to be made with the idea of rendering real practical assistance and features, particularly two sets of art trimmings, one furnishing monthly a seasonable background of screens and panels and the other comprising a set of display boards to which small items may be attached. In addition, the service supplies 270 new price tickets each month, 180 small announcement cards each month; 54 show cards each month; four blue-prints showing original settings each month, and a merchant's calendar, which acts as a tickler in reminding him, well in advance, of important things he should consider in making his window and interior merchandising display attractive and resultful, giving him important holidays, seasonable events, etc.

The service also includes a monthly confidential letter containing special display information and ideas; a monthly review of the best display ideas culled from leading trade papers and a monthly "store stunt" report designed to give the store a personality, a sheet of show card catch phrases and a file folder for keeping this information in. Advice on display problems is to be given by mail or in person upon request. The cost of the entire service is \$195. Fifteen dollars payable upon receipt of the display set and \$15 monthly.

The service is being compiled under the personal direction of A. E. Hurst, a recognized authority on merchandising display and author of several works on the subject. The material which is included in this service is the result of exhaustive research data on merchandis-

ing display from many sources and through questionnaires to independent owners of retail stores.

Introducing an Association to the Public

Introducing

To the Public of San Antonio,
and Trade Territory

THE AUTOMOTIVE SALES MANAGERS CLUB

of San Antonio

When in Doubt Ask To See This Emblem

Place Your Confidence Wherever You See This Emblem. It Will Not Be Violated.

Believing that the Automotive Industry, by and because of its very nature, is entitled to, and demands, the very highest class of representation through truthful and intelligent salesmanship—

We, the Members of the Automotive Sales Managers' Club of San Antonio, do hereby pledge ourselves, individually and collectively, to maintain in all our relations to the public, a policy of fairness, morality, and fidelity of purpose.

That we will countenance no unfair business practices, nor will we retain in our employ, any salesman or other employee over whom we may have jurisdiction, if found guilty of making any misrepresentations whatsoever concerning our products, or if found guilty of any attempt to take an unfair advantage of any buyer or prospective buyer of our products, or if found guilty of making any statement or statements calculated to injure a competitor, or to disparage or belittle a competitor's product.

Further—That our Advertisements will contain no statement concerning our product or our policies not wholly true.

Signed: *Chas. H. Hurst* (With Winerich Motor Sales Co.) President. *Ellis J. Green* (With San Antonio Buick Co.) Secretary-Treasurer.

DIRECTORS:

MEMBERS:

Want to introduce your association to the public, explain what it was organized for, sell the advantages of trading with its members? Here's how the Automotive Sales Managers' Club, of San Antonio, was introduced through newspaper advertising recently. The ad ran in four successive Sunday issues of San Antonio papers.

These Ads Brought Used Car Prospects

WITH used cars increasingly difficult to dispose of at any profit, one Cleveland passenger car dealer varied his advertising somewhat with good results. Instead of the customary listing in the classified section, a four-inch display ad on the financial page of a daily newspaper and in the auto section of the Sunday edition was tried each Wednesday and Sunday during April and May. The past few weeks this copy has contained no itemized listing, but referred merely to the responsibility of the firm, the quality of the used cars and desire to move them quickly, with the old "No Reasonable Offer Refused" wording in heavy type. The expense of this campaign ran about 350 per cent higher than the conventional liner ads for an equal period, but it brought in a gratifying quantity and quality of live prospects and proved to be the "strong medicine" required for a bad case.

An Advertising Idea

A GOOD slogan is valuable to any business regardless of its nature, for the slogan presumably reflects the character of the business, and people are wont to judge the establishment in that manner. A group of fourteen business houses in Macon, Ga., including two automobile dealers, recently conducted a co-operative advertising campaign that proved how really valuable the slogan is. A full page of space was used and this was divided into fourteen separate ads. In each ad nothing was printed save the slogans of these fourteen business houses. A contest was conducted and prizes offered for the best advertisements written around these slogans and giving the correct names of the various firms represented by the slogans. Many people entered the contest, and it was a notable fact that virtually every ad submitted gave the correct names of the companies in connection with the various slogans. The contest served to prove how closely the public associates the slogan with the business.

Can You Use an Appraisal Card Like This?

AFTER having two or three costly experiences the past few months in appraising used cars and deciding the amount to allow for them on a trade-in for a new car, B. V. Stodghill, assistant sales manager of the John Smith Co. of Atlanta, retail Buick dealers, has originated an appraisal card idea that will hereafter serve as ample protection to the company when allowances are made for used cars.

The card properly filled out appraises the car accurately and carefully from axle to hood and from radiator to tail-light. All extra equipment is set down on the card, condition of the tires, battery, paint, motor, curtains, etc. At the bottom of the card space is provided for entering the price offered to the customer for the used car.

Many times the owner will not accept the price offered by the dealer at the time the first appraisal is made, but two or three weeks later he may decide to change his mind and advise the dealer to that effect. All the dealer needs do then if he has previously made out an appraisal card is look over the car to see if it is in the same condition as when the appraisal was first made. If there happens to have been a blowout in the meantime, or something of that nature, it would naturally be necessary to lower the original offer. If the dealer depends on his memory, as is most often the case, he is apt to lose money on the transaction. With an appraisal card,

APPRAISAL CARD.		
Date		
Owner	Address	
Salesman	Appraiser	
Car	Serial or Motor No.	
Extra Equipment		
CONDITION OF CAR.		
Tires—L. F.		
—R. F.		
—L. R.		
—R. R.		
Spare Tire		
Battery		
Paint		
Motor		
Clutch		
Transmission		
Rear Axle		
Top		
Curtains		
Tools		
Running Boards		
Carpets		
W. Shield		
Hood		
Side Splash Aprons		
Front Splash Aprons		
Grease Pan		
Generator		
Speedometer		
Horn		
H. Lamps		
Tail Lamps		
Radiator		
Hub Caps		
Wheels		
Rims		
Crank Cover		
Body		
King Pins and Bushings		
F. Wheel Bearings		
R. Wheel Bearings		
Gas Tank		
Top Hangers		
Floor Boards		
Tire Rack		
Muffler		
Valves		
F. Axle		
R. Axle		
Remarks:		
Car Interested in		
Price offered		
Will Take Price \$		

however, that had been completely filled out when the car was originally examined there is little chance to go wrong.

When Owners Fail to Call for Cars

THE shop specializing on general repair work is often at a loss for storage space for cars whose owners delay calling for the same. T. S. Randolph, manager of an East Cleveland repair shop, runs finished repair jobs to two nearby public garages (one, a new place looking for storage customers; the other, a garage featuring accessories and supplies). Because of the business thus accruing, these garages make no charge for storage the first 24 hours. After that 75 cents a day is charged. Randolph collects all storage charges along with his repair bills, and settles with the garages weekly for all but the first 24 hours or less. Randolph keeps the first 75 cents to cover cost of removal. The car owner is given a receipt slip listing the storage charges collected and authorizing the garage to release "Car: License Number —; Make —; Model —." Two conspicuous signs warn patrons of the repair shop of the removal and storage charges of uncalled for finished jobs. Results of this co-operation have been generally satisfactory to all parties, and the average owner seems to realize the fairness of the prompt removal appeal when he is reminded that he does not care to have his own car left outside a crowded shop either before or after the repair work is done.

The Accessory Merchandiser

Coupon Books Increase Oil and Accessory Sales

TO stimulate the sale of the two lines of oil the company carries, and at the same time to bring its tire, accessory and service departments to the attention of a larger number of automobile owners, the Scholder Tire & Accessory Co. of Birmingham, Ala., issues a book which contains twenty printed coupons, each one good for a quart of either Veedol or Monogram oil. The book is sold to the automobile owner for \$5 and he obtains the twenty quarts of oil in this way for \$1.50 less than it would cost him without the coupon book. In addition the company offers free service to all bonafide holders of these coupon books at any hour of the day or night. This includes tire service, mechanical service, battery service, etc. The plan has been extensively advertised and has resulted in the sale of numerous coupon books, and thus the securing of many new customers.

Cultivating Chauffeur Business

PPRIVATE chauffeurs influence many sales of equipment and supplies for high-grade cars. E. M. Thom, Cleveland

accessory dealer, cultivates their patronage by selling chauffeurs' personal supplies, such as caps, gloves, puttees, boots, hand soap, etc., at a close margin of profit, which is more than offset by the substantial profit on a set of seat covers, shock absorbers, bumpers, trunk, tonneau, windshield, tires, and other sales that arise from the chauffeurs' reference to Thom's store when the owner contemplates improving his car or equipment.

Rainy Day Accessories Display Boosts Sales

ASPECIAL grouping of "rainy-day accessories" in the show windows proved worthwhile in H. M. Thom's accessory store, Cleveland. Windshield cleaners, visors and rubber strips for windshields, door opening curtains, plate glass top lights, Fabrikoid covering, tire chains, scuff plates, mats, and Ford coil covers were the principal items featured in the two weeks midsummer display. "Fair-Priced Foul Weather Needs" was the caption of a canvas sign spread across the same. More than ordinary attention was drawn, and sales took gratifying spurts during the damp spells.

Steering Wheel Varnishing Jobs Easily Sold

A UNIVERSAL trouble, a simple remedy, and a partially idle employee made busier. These are the conditions met and overcome in a plan worked out by the Saffold Garage, Cleveland, which has put a night man to work revarnishing steering wheels of patrons' cars overnight with a new quick-drying varnish. Nothing is easier to put up to the owner of a car over six months old than a cure for the dull, scratchy, worn look of the steering wheel. Since revarnishing can be done overnight at a charge of \$1.50 to \$2.50, depending on the size, with no lay-up of his car, the average motorist tries this service with very little persuasion.

The operations of cleaning, sandpapering, and applying the varnish are simple and rapid. Average net profits have run about 62 cents per car, and 33 such jobs were done the first six weeks, with only "word-of-mouth" advertising. The treatment is satisfactory also on wooden instrument boards and tonneau cowl boards. A circular on this new phase of night service is being prepared to attract more patrons. It will be widely distributed.

Editorial Observation

The Dial Bill

DEALERS have more than a passing interest in the Dial bill, which has passed the Senate and is now pending in the House of Representatives. This measure was designed to protect the interest of innocent persons in property which is used in the unlawful conveyance of goods or commodities. It applies in particular to automobiles which are used to haul "bootleg" liquors.

The bill will probably remain on the House calendar or be pigeon-holed indefinitely, unless strong pressure is brought to bear upon Representatives. Delay in the enactment of this legislative measure involves a risk to automobile dealers because of the prevailing practice of seizing automobiles regardless of their ownership and confiscating them if spirits or spiritous liquors are found therein. The Dial bill protects the dealer's lien on a car sold on time, as it provides that, "No proceeding under this section for the forfeiture of any vessel, boat, cart, carriage, or other conveyance, or horses or other animals shall destroy the interest in any property of any person who intervenes in any forfeiture proceeding, who had no knowledge or reasonable grounds for knowing of the use or intended use of such property for conveying such goods or commodities."

The measure is worthy of the support of dealers, as well as automobile owners, for it protects their equity in cars, which in many recent cases has been forfeited when the operator violated the law by carrying commodities whose transportation is prohibited.

Dealers and associations without delay should urge their Representatives to vote for the Dial bill.

Why Association?

PERSONAL contact with other men in the automotive business is one of the great benefits to be derived from membership in trade associations. The experience of an electrical service man in a large Eastern city shows how membership in an automotive service association enabled him to retain the trade of a car dealer.

A customer of the car dealer's had some trouble with his electrical system. The dealer referred him to the electrical service station handling the equipment. A few days later the customer came back "sore as a boil." His electrical system had gone wrong again.

Now the dealer and the electrical service man were fellow members of the service association and had come to know each other pretty well. An unsatisfactory job didn't jibe with the dealer's opinion of the kind of a man he believed the service man to be. So he called him up for an explanation. He found that the customer had never been to the service station. Instead he had mistakenly gone to an unreliable competitor shop two or three doors away from the authorized station.

The difficulty was soon straightened out. Had it not been for the personal acquaintanceship gained through the service association, it is very probable that the dealer

would have damned the electrical service man and sent his work elsewhere.

When it comes time to renew your membership in your local trade association, send the treasurer a check promptly. You can't afford NOT to belong.

Uniform Laws

EVERY little while something happens to emphasize the need of uniform motor vehicle laws in the various States. There is a situation of this sort now in New England. Maine has started a campaign to rule off the highways in that State trucks exceeding the 18,000-lb. limit law passed by the last Legislature. It has particularly hit trucks from Massachusetts carrying loads into Maine.

Now Massachusetts has just adopted a headlight law effective on Aug. 15 with specifications different from those in other States in which certain types of devices and lenses are approved, and all lights must be 21 candlepower. As Connecticut allows 24 candlepower, and many owners there have that type it will mean friction. New York will come into it, also, because of being an adjoining State, not to mention New Hampshire, Vermont and Rhode Island.

As a result of all this there are bound to be squabbles and retaliation between the States. New England, being a small section, will find it all the harder to enforce the law, particularly at this time of the year with so many tourists passing through.

Isn't it time for the organizations in the industry to assert themselves to try to bring about some sort of order out of such chaotic conditions?

Reports persist of jobbers who have on their shelves obsolete stock, merchandise which has been replaced to the general trade by a better article to serve the identical purpose. These jobbers would do well to get rid of this material before the price drops still more, but a number are hanging onto this merchandise in the hope that their salesmen may be able to dispose of it at the old price. Then the dealer has the merchandise on his shelf instead of the jobber. Jobbers would be much better off to get rid of this obsolete and semi-obsolete material at almost any price, put it on cars at a reasonable figure, and push the newer material for which the sale is more ready. In the one case they are tying up good money; in the other case they are building up their business.

What has become of the old-fashioned gentleman who only needed a team of driving horses but kept a dozen because he liked to see them grow? *He owns a high priced limousine and touring car and some day a salesman with imagination is going to sell him a low priced coupe or two to hack around in.*

These folks who talk about a saturation point for automobiles are second cousins to the people who have postponed the millennium seventeen times since the administration of John Quincy Adams.

LETTERS *from* READERS

About Jobbers' Buyers

Editor Motor World: I was immensely amused a few days ago in reading an article in which a jobber criticized some of the manufacturers, who know absolutely nothing of our business, and the methods that they employ to get business; and who thinks that all the jobbers' ills are caused by these particular manufacturers.

Two years ago, during the Boston Automobile Show, some 20 manufacturers and salesmen, and a few jobbers, were gathered together in the parlor of one of the big hotels, discussing conditions, when apropos of nothing one of the manufacturers said: "There are three buyers in New England." Amazement, ridicule and consternation appeared on the faces of those present. Without a word being spoken, the faces gradually sobered up, and everybody in the room was serious. After five minutes one of them said, "Bill Jones is one." To which the manufacturer agreed. It took fully five minutes for the second name to be mentioned. After another five minutes, a man who had spent his entire business life selling the automotive jobbers in New England, said, "Who in h— is the third?"

Until the average salesman knows positively the general calibre of buyers in our business is top notch, our industry, from a jobbing standpoint, will not be right.—Observant.

Jobbers—and Hens

Editor Motor World: Mr. Parlin gave jobbers who attended the A. E. A. convention a severe shock when he prophesied that there would be more jobbing centers and more jobbers.

A few months ago in one of our jobbing cities a prominent salesman was told: "Here is a piece of pie. You divide it into so many pieces, and everybody gets a fair share." (Nothing was said about all the pieces being the same size.) "When you cut this pie into more pieces," said the jobber, "nobody gets enough. Under no circumstances, can we allow this pie to be split into more pieces."

I have a number of chickens that I keep in one special pen, and these hens find a certain number of extra delicious morsels every day. These hens figure, no doubt, that any additional hens would be intruders. I secured a wonderful specimen of Rhode Island Red, put this hen in the pen, and then the fun started. The other hens got after the Red, but believe me, that Red fought back. If the other hens don't get as many of these morsels as they did before the advent of the Red,

the Red should worry. She gets hers by fighting for them. If her ability is

greater than that of the other hens, she has the better of the competition.—Manufacturer.

You Can Never Tell

I KNEW a salesman in Chicago who received information that one Mr. Jackson living on the South Side was in the market for a very high priced car. He drove down the street on which said Jackson lived and found that he was a colored gentleman with the appearance of a first-class Pullman porter.

He did not even state his business, but said he had the wrong number.

That afternoon he stepped into the showroom just in time to see the floor man take Mr. Jackson out for a demonstration, and later saw him sign up for a sedan to the tune of about six thousand five hundred dollars.

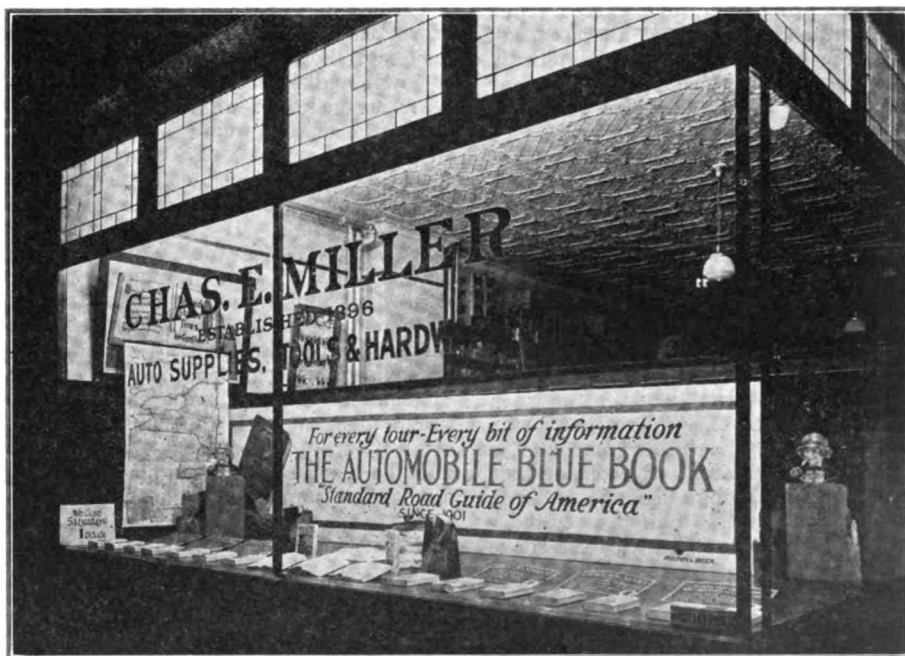
Mr. Jackson was the trusted chauffeur of a big plantation owner in northern Georgia and was vested with power to buy what he deemed wise in the sedan line. Had salesman number one stated his business and been just a common ordinary fellow for a few minutes, he might have made a pretty penny that morning.—Framton Facts, official organ of Hudson-Framton Motor Car Co., St. Louis.

Bills and Cooperation

Editor Motor World: Jobbers find collections not quite as good as they should be. They have stopped selling certain customers until they can collect some money. Manufacturers are governing themselves accordingly.

I note in reading some trade reports, that a certain jobber who owed \$200 to a manufacturer, paid \$100 on account and gave a 30-day note for the other \$100. The manufacturer has not accepted the payment, and insists on the entire payment, and refuses additional shipments until he gets all his money. This is a time for cooperation. The fact that the man pays \$100 shows that his intentions are good. It seems to me that the manufacturer may be justified in not increasing the line of this jobber, but let's base our credits on the moral risk and the good intentions, rather than on actual financial standing, unless, of course, there is no chance of getting the money. Let's help to boost the business, not kill it.—Reader.

Something Different Helps Sustain Window Interest



Here's another display used by Charles E. Miller, New York jobber, whose windows are attracting considerable attention because of the effectiveness of their educational appeal. Knee deep in the touring season, it was particularly timely, fitted in nicely with Miller's educational display plan, and incidentally sold a large number of these valuable books.

A Department of

BETTER MECHANICS

Conducted by J. HOWARD PILE

No. 203

When asking for information, please state whether you maintain a permanent file of Motor World, as many inquiries are answered by reference to previous issues

What Things Affect Fuel Economy?

A Few Suggestions as to Parts and Their Better Adjustment Tending Toward Greater Fuel Economy of the Car or Truck

ALTHOUGH gasoline has within the past few months been reduced materially in price, yet the cost of the fuel is still high enough to amount to a considerable part of the maintenance of the car and anything that can be done to reduce the fuel consumption of the car will be welcomed by both the owner of a new car and the owner of a car that has been in service for some time.

The thing that is most thought of in connection with gasoline mileage is, of course, the carbureter adjustment and this is without doubt the cause of a considerable proportion of wasted fuel. Proper adjustment in most all cases will reduce the consumption very materially but there are also other parts of the car which have a direct or indirect bearing on the fuel economy.

The proper vaporization of the fuel is important. Assuming that the carbureter is equipped with the most up-to-date heating equipment for the air, fuel or both, pains should be taken to see that all this equipment is in first class working order. The carbureter jet or jets must be clean that they may give the correct shape, angle, etc., to the air and fuel. The fuel line must be free of leaks and the gasoline tank must be in such condition that the fuel cannot evaporate or splash out. The intake manifold is frequently the cause of considerable losses of fuel through leakage between the manifold itself and the cylinder ports. Excessive running with the choke on or the choke so adjusted that it is too far closed are also worth looking into.

Leakage in the Cylinder

The pistons, rings and cylinder walls are frequent causes of fuel losses through wear, looseness and scores. This subject was covered fully in Motor World issue of May 11, page 24. Briefly, the cause of trouble is loss of compression,

pumping of oil to the combustion chamber thus forming carbon and the leakage of liquid fuel down into the crankcase diluting the lubricant. The formation of carbon leads to sluggish engine operation, reduction of power and necessity of more fuel to the mile. In addition to this, the carbon causes preignition and carbon knock which can be temporarily relieved by adjusting the carbureter for a richer mixture which again uses up more fuel, causes still more carbon deposit and eventually has to be remedied by a complete removal of the carbon and the cause of its formation.

The fitting of the valves and their proper timing have much to do with fuel economy. Leaky valves lose a good deal of power, make necessary changing down gears on moderate hills and other places where the engine would more economically pull in high. The timing of the valves is very important. A check-up with the recommended factory timing should be made. If the timing is too slow, most of the fuel will be going toward heating the engine up rather than developing power, as the valves will open too late to be efficient. Too early timing is also inefficient and allows insufficient charges to enter the combustion chamber, whereas too late timing does not let the charge get out after it is fired. Ignition timing should also be checked to ascertain if it is mechanically possible to advance the spark to the full running position. Much fuel can be saved by keeping the spark always at the maximum possible advance.

Clogging of the muffler or a poorly designed muffler leads to considerable back pressure, which reduces power and increases fuel consumption. It sometimes happens that the tail pipe gets closed up or mashed, which produces the same effect. To show the serious effect of back pressure, it is well known to many repairmen that most of the engines on

the smaller cars can be stalled by simply placing the foot tight against the tail pipe.

Effect of Improper Cooling

The radiator and cooling system in general have an effect of fuel consumption. Speaking generally, the hotter the engine runs, the less fuel will be used, but this has some exceptions. An engine which is run too cool allows condensation of the fuel in the combustion chamber, which is wasted and which produces excessive carbon and crankcase oil dilution. The nearer an engine runs to the boiling point, the more economical it is, but due regard must be had for reserve cooling on hills, in low gear, etc. Thermostatically controlled systems sometimes are adjusted so that the engine runs too cool.

Besides these points there are many other parts and places where the adjustment or poor operation may affect the amount of gasoline used. Dragging brakes use up fuel just as much as if the car were towing a trailer. A slipping clutch also uses power. Poor wheel alignment makes the car run harder and soft tires use up from 5 to 30 per cent of the engine power, according to how soft they are.

All of the bearings in the car have their effect in fuel consumption, and while they must not be allowed to get too loose for other reasons, tightness surely uses up power.

Auto Gear Information Service, published by Auto Gear Information Service, 533 East 149th Street, New York City. A booklet containing 300 cases of interchangeable gears and axles including cars from 1912 to 1920, giving the gear ratio on various cars that have identical gears. Subscription of service is \$10 per year and future information lists will be issued on other subjects.

Repairshop Shortcuts

No. 3006—Soldering Iron for Radiator Work.—A heavy iron is tipped with threaded lugs, the end of the soldering iron being cut off square and drilled and capped. The tips are made of heavy copper electric cable.—C. R. Pierson, Central Garage, Medina, N. Y.

No. 3007—A Storage Battery Carrier.—A storage battery carrier is made of a piece of 1 in. pipe a little longer than the longest type battery, a heavy wire hook goes through drilled holes in the pipe and engages the battery handle.—George A. Goeke, Waukon, Iowa.

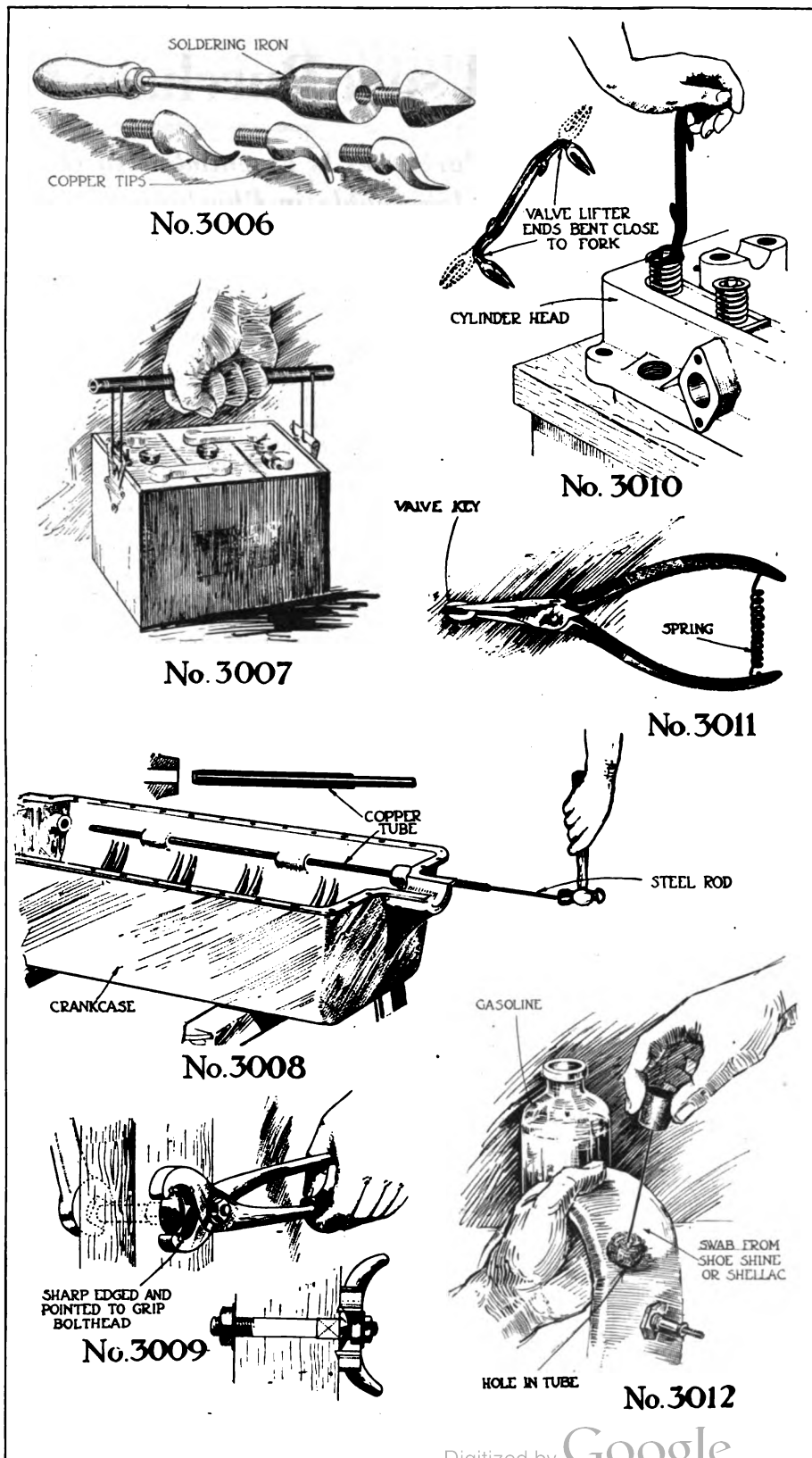
No. 3008—Inserting Copper Tubing in Crankcase.—New copper tubing is inserted in crankcase by placing a piece of cold rolled steel in the copper tubing, tapering the end of the copper tubing slightly and tinning with solder. The other end of the steel rod can be driven in with a hammer.—John Gibbs, United States Hammered Piston Ring Co., Irvington, N. J.

No. 3009—Grip for Carriage Bolt Head.—The head of a carriage bolt is gripped by a pair of pliers made with sharp teeth on the inside to prevent the bolt from turning around.—O. Janzen, Bogota, Republic of Colombia, S. A.

No. 3010—Overhead Valve Tool.—For removing the keys of overhead valves. The valve lifter has the ends bent in at right angle so that tool can be pushed down vertically with the hands.—Scott S. Bond, Capital Auto Sales Co., Inc., Hattiesburg, Miss.

No. 3011—Valve Key Tool.—A tool for inserting valve keys is made by drilling the handles of a small pair of pliers and inserting a coil spring as shown. This prevents the valve key from dropping when pressure is released by the hand.—Herbert Mooney, Louis Bellinger Garage, Worcester, N. Y.

No. 3012—Gasoline Bottle for Tire Patching.—A convenient arrangement for washing tubes for patching is made by using a bottle with a stopper that has a sponge or swab such as a shoe polish bottle. This prevents the gasoline from evaporating and also furnishes a handy swab.—Herbert Mooney, Louis Bellinger Garage, Worcester, N. Y.



MAKE A DOLLAR

SEND in a sketch and a description of the device you doped out to make your work easier. Motor World will pay a dollar for every idea accepted for publication.

SYSTEM IN BUSINESS

This Department Is Intended to Assist Motor World Readers in Working Out Their System Problems — It Will Answer Questions Concerning System and Accounting

Do You Use a Purchase Order Form?

Recording Purchases Is Essential—An Order Covering Each Purchase Is Invaluable in Checking Shipments and Invoices

THE careful recording of all purchases is an essential feature of an accurate accounting system. There is some tendency among business men to handle the purchasing end of their businesses in a rather slipshod manner. Of course, they try to buy carefully and to limit their purchases to their needs, but they neglect to make any record of purchases. They depend on the seller's invoice for their records.

A purchase order form is a necessary part of the records of a business. Without it the business man must depend on his memory when he checks over his invoices. In case of a dispute, it is his word against that of the seller. If the seller ships him something which he does not want, it may be very difficult for him to prove that he did not order it unless he has forwarded a purchase order. Furthermore, it is a check on dishonesty.

A typical purchase order is illustrated in Fig. 1. At the top of the form the name and address of the buyer are printed, and in the upper right hand corner a space is provided for the purchase order number. Following this comes the date, and then spaces are provided for the name and address of the seller. Next come the shipping instructions and routing, and then there is a space for inserting the terms. The part of the order below this is ruled off in columns and is used to describe the material ordered. The signature of the buyer appears at the bottom. There should also be a line stating that the purchase order number must appear on the invoice.

The purchase order should be made out at least in duplicate. The seller should receive the original copy and the duplicate should be filed in numerical order. Whenever material is purchased, except when purchases are made from petty cash, this form should be filled out. Orders placed over the telephone should be confirmed with this form by mail.

It is important that these forms be numbered consecutively, original and duplicate, of course, bearing the same number. This feature is a precaution against lost orders, and when the invoice comes in it is a simple matter to locate

the purchase order because the invoice bears the number of the order covering the material billed. Because the order states definitely just what was purchased, it is a simple matter to check the invoice for overages and shortages.

The material as received should also be checked against the order. Some companies make an additional copy for the use of the receiving clerk in making this check, but in a small establishment one copy is sufficient for checking both the material and the invoice.

Another valuable advantage of the purchase order is that it prevents oversights. When an order is placed, the record of it prevents its being forgotten. If the practice of looking through the order file at regular intervals is adopted, overdue shipments will be discovered in sufficient time to start an investigation

that will bring results before the stock of the material ordered is exhausted.

The numbering system also reduces the possibility of an order being lost. If any copy is missing from the file, the missing number will indicate the fact. Furthermore, the chances of the same material being ordered twice is lessened, as before ordering any particular article the file may be checked through to see whether an order has not already been placed for the material.

Especially to the man with a small business, a system of purchase orders may seem like needless red tape. But it is just as important to watch expenditures as it is sales. Everyone has lapses of memory. By putting down all purchases in black and white the difficulties resulting from such lapses are avoided.

PURCHASE ORDER NO. _____			
C. J. REILLY, INC. CALLAWASSA N.J.			
			192__
To _____			
Please ship to _____			
Routing _____			
Terms _____			
PLEASE PUT PURCHASE ORDER NUMBER ON YOUR INVOICE			
QUANTITY	DISCRIPTION	PRICE	AMOUNT
F. O. B. _____		C. J. REILLY, INC. By _____	

Fig. 1—A specimen purchase order. Orders should be numbered consecutively and at least one carbon made.

SCIENTIFIC CONSTRUCTION

GARAGES

SHOWROOMS

REPAIRSHOPS

Conducted by DONALD D. BLANCHARD

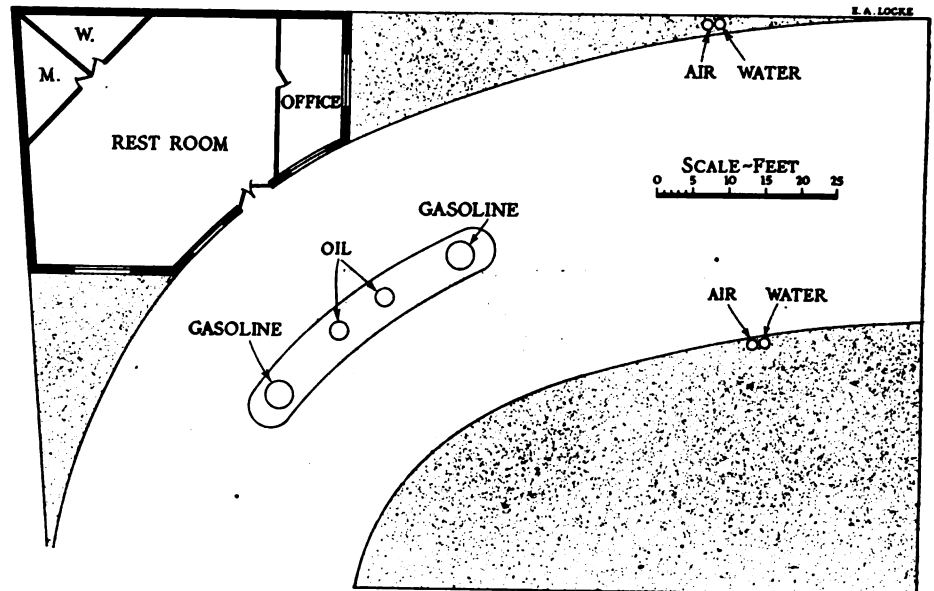
Planning a Drive-in Filling Station

Building Should Be Attractive and Grounds Well Kept—Prompt Service Important

THE drive-in filling station must be designed to attract, hold and serve a maximum of trade at a minimum of expense. The margin of profit on gasoline is small and each individual sale amounts to but little. Consequently the filling station must do a volume business to be profitable.

In planning a filling station, the first consideration is location. Off hand it would seem to be most desirable to locate on an important highway where there would be a large number of cars passing by. There are many successful filling stations so located. However, investigation has shown that a very small percentage of the cars passing stop for gas. One of the most profitable locations is in a residential section where almost everyone owns and garages his own car. In such a place, the filling station has a splendid opportunity to build up a steady trade through courteous and efficient service.

Assuming that the filling station has been located where there are sufficient trade possibilities to support it, the next problem is to attract business. The building should be attractive and the

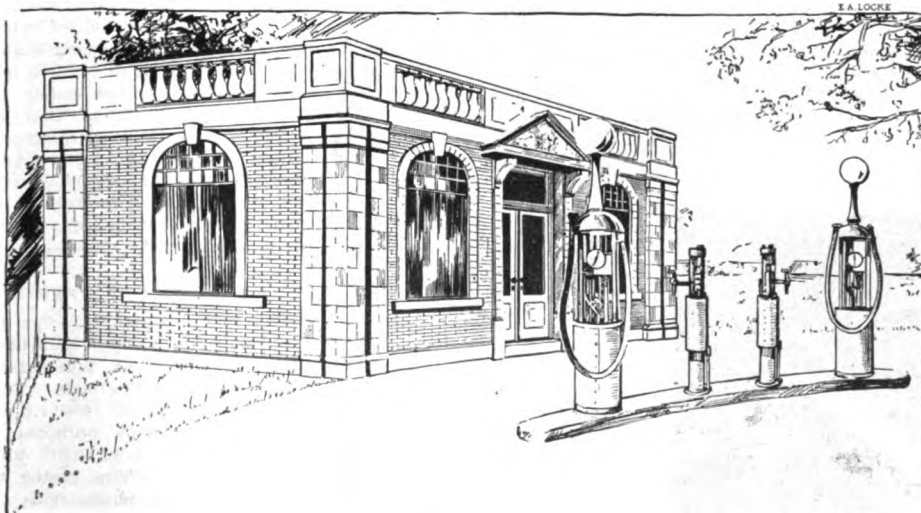


The air and water connections are placed away from the pumps so that this service will not interfere with sales

property surrounding it should be neat and well kept. The driveways should be cleaned frequently to prevent the accumulation of grease and oil. Toilets and, if possible, a restroom, should be provided for the convenience of customers. Signs should be erected and

they should be lettered so that a driver coming from any direction, can read them at a distance of several hundred feet. This is important as he must have time to slow down sufficiently to make the turn into the station.

The service rendered determines largely whether a filling station holds the trade. Regardless of whether he is in a hurry or not, the average driver will not wait to have his tanks filled. If he can't drive right up to the pump, he very likely will drive on, taking a chance that he will come to another station before he runs short of fuel or oil. It is consequently of prime importance to have sufficient pump capacity to take care of the average demand promptly and the peak loads with reasonable dispatch. In order to secure maximum capacity from the pumps, it is essential that cars be gotten away from the pumps as soon as their tanks are filled. The free air and water service should be placed where it will not interfere with the sale of gasoline. For the same reason, if accessories and tires are sold, this part of the business should be conducted so that pumps will not be blocked. If possible, a separate person should take care of this department so that the pump attendant will be free.

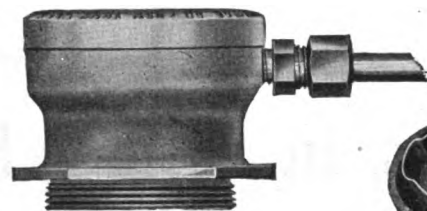


A handsome building and neat, clean grounds are important factors in drawing trade

Automotive Equipment

IDEAL GASIFIER

The gasifier is attached to the top of the gasoline supply tank. Copper tubes lead from it to the inlet manifold, which is arranged to receive injector. An air inlet is provided into the top of the tank at the end opposite to the gasifier. In this way the gasoline fumes in the top of the tank are drawn into the inlet manifold. Price \$15.—Ideal Motor Appliance Co., Singer Building, New York City.



Ideal Gasifier

FORD REPLACEMENT PANEL

A replacement instrument panel for the Ford car. It is furnished complete with a high grade dash lamp which operates in conjunction with regular lighting switch. This feature makes it unnecessary to install a separate dash light. Price \$3.—Briggs & Stratton Co., Milwaukee, Wis.



Ford Replacement Panel

COLUMBIA IRREVERSIBLE STEERING GEAR FOR FORDS

The Columbia steering gear has three moving parts and operates on the same irreversible principle employed on other makes of cars. All bearings are of large surface and ample facilities for lubrication are said to be provided. No machine work is necessary for the installation of the gear. It is slipped on over the lower end of the steering post and bolted to the same holes in the frame. The small gears at the top of the steering post are not disturbed. Price \$12.50.—Columbia Carburetor Company, 111 W. Monroe St., Chicago.



Columbia Irreversible Steering Gear for Fords

DIM-RITE DIMMING SYSTEM

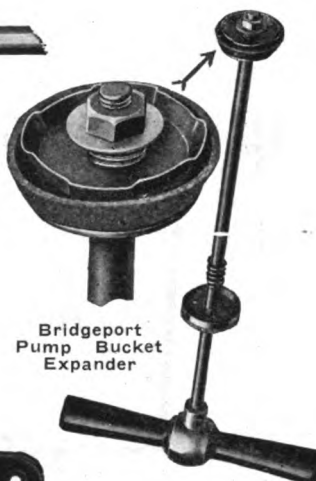
Dim-Rite is a fixed auxiliary lamp fastened on the right side of the car and is focused to throw a 60-ft. shaft of white light, which strikes the road two feet to the right of the line in which the right wheel is running. The object of this auxiliary lamp is to illuminate the edge of the road. It is operated by means of a switch attached to the steering post. This switch is also connected with the headlights so that when the Dim-Rite is thrown on, the headlights are automatically dimmed. Price, \$16.50 complete.—A. S. Campbell Co., 161 Prescott Street, East Boston, Mass.



Dim-Rite Dimming System

BRIDGEPORT PUMP BUCKET EXPANDER

All Bridgeport tire pumps of the No. 16 and Ace models have



Bridgeport Pump Bucket Expander



Melle Traffic Signal

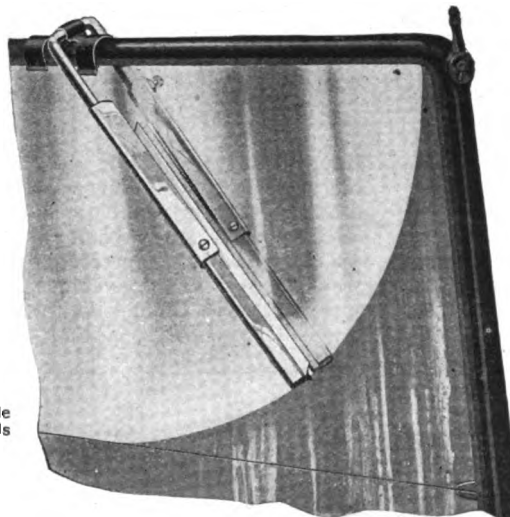
a device for mechanically expanding the bucket on the down stroke, so that the bucket will carry compression without slippage from the very beginning of the stroke. The expander consists of a specially stamped sheet brass cup mounted on the plunger rod directly beneath the leather gasket. The bucket is held between a large flat washer and a spacing bushing by means of a nut on the end of the plunger rod, which clamps the assembly against the shoulder. The back washer is slightly smaller in diameter than the barrel of the pump. The expander is a specially shaped disk mounted on the spacing sleeve and held in position by a suitable spring. The spring is just drawn weak enough to allow the pump to give free passage to air on the up stroke and yet maintain it in such position that it will press the bucket against the walls of the cylinder immediately the down stroke is started.—Bridgeport Brass Co., Bridgeport, Conn.

MEILE TRAFFIC SIGNAL

The feature of this signal is that it operates automatically. The signal shows Stop or the direction of a turn. It is made in two types. Type "A" consists of a signal box front and rear and sells for \$50. Type "B" consists of a completely equipped box for the rear of the car only. Price \$35.—The Melle Mfg. Co., Twenty-first St. and Illinois Ave., East St. Louis, Ill.

K-M WINDSHIELD CLEANER

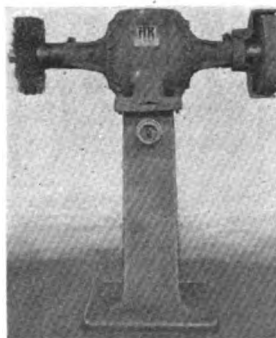
A mechanical windshield cleaner that will fit any type of windshield. Three interchangeable wipers are provided with each cleaner. The spring brass wiper is designed to remove ice and frost. The felt wiper is chemically treated, so that it prevents a collection of moisture after one wiping. A rubber wiper is also furnished. There are three different types of attachments. Price \$3.—K-M Manufacturing Co., Toledo.



K. M. Windshield Cleaner

HB MOTOR BUFFER

The motor in this buffer is rated at 2 h.p. The tool is furnished complete as illustrated, less the grinding wheels. The motor operates at 1800 r.p.m. The machine base occupies a floor space of 17 x 17 in. and weighs 275 lb. The motor is built for single phase, two or three phase, or direct current.—Hobart Brothers Co., Troy, Ohio.



HB Motor Buffer

ANTHONY AUTOMATIC GASOLINE PUMP

With this pump the customer helps himself by placing the hose in the car, deposits coin in the slot and then presses the button. The pump measures out the amount of gasoline for any given amount of money, either quarter, half-dollar, or dollar. It is operated by means of compressed air at 15 lb. pressure. The feature of devices of this kind is that it is possible to give twenty-four hours' service.—Anthony Liquid Vending Machine Co., Saint Anthony Park, Saint Paul, Minn.

ARMSTRONG VAPORIZING MANIFOLD

The feature of this manifold is a small evaporating disk. The mixture enters the manifold from the carburetor and the unvaporized portion impinges on this disk and is absorbed. The flow of air coming from the carburetor evaporates the gasoline absorbed in the disk. Price, \$10.—J. C. Armstrong Co., Beloit, Wis.

WALKER AUXILIARY RADIUS ROD

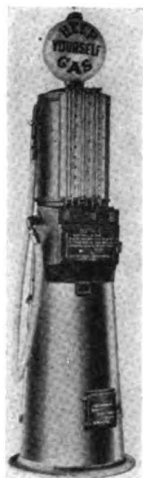
This rod is constructed from 1 in. x 1 in. x $\frac{1}{4}$ in. steel angles in two pieces, which at the front end are flattened out and by means of U bolts are fastened to the front axle itself. The two angles are riveted to a malleable casting, which fits into the crotch of the Ford radius rod, to which it is fastened by a bolt and a plate. It fits the new type of Ford front radius rod.—Walker Mfg. Co., Racine, Wis.

WAGNER AUTOMOBILE CREEPER

The body of this creeper is 36 inches long by 24 inches wide, and it is fitted with a head rest extension which increases its length by 7 inches. The cushion on the head rest is made of imitation waterproof leather and is well padded. The two outside strips of wood along the sides of the creeper are raised an inch higher than the balance of the platform of the creeper. The main body of the creeper is less than 2 inches from the ground. It is fitted with ball-bearing castors $1\frac{3}{4}$ inches in diameter. The tool rack can be attached to either side of the creeper. This rack is made of japanned sheet iron and is 4 inches wide by 32 inches long. Price \$54 per dozen. Price of tool rack, \$18 per dozen.—Wagner Manufacturing Co., Cedar Falls, Iowa.

EZE SPRING GREASING TAPE

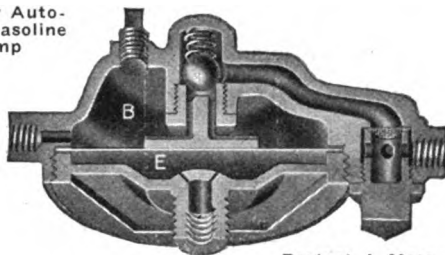
This tape is inserted between the leaves of the springs. It is made in the form of a flat paper tube containing a lubricant. The paper is disintegrated by the rubbing of the springs, thus



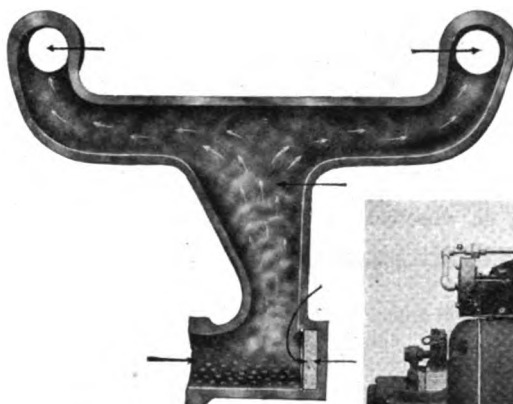
Anthony Auto-matic Gasoline Pump



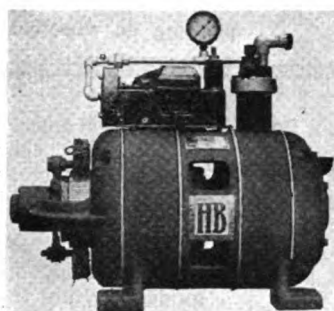
Ambu Separator Remover



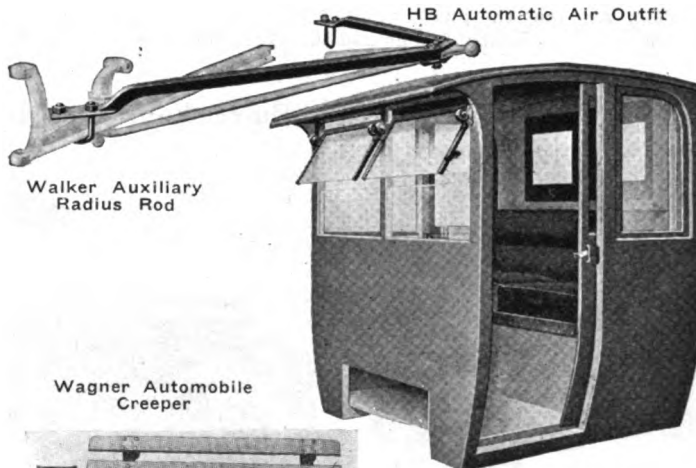
Protect-A-Motor



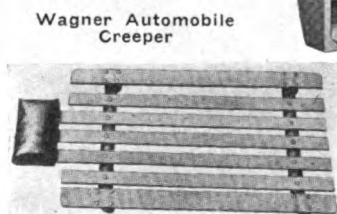
Armstrong Vaporizing Manifold



HB Automatic Air Outfit



Walker Auxiliary Radius Rod



Wagner Automobile Creeper

Wilson-Built Truck Cab

leaving the lubricant in contact with the wearing surfaces.—E. R. White, 21-29 Plymouth Avenue South, Rochester, N. Y.

AMBU SEPARATOR REMOVER

A special tool for removing battery separators. It is similar in shape to the ordinary putty knife, but has teeth punched in the face of it. When the blade is inserted between the plates these teeth grip the separator and simplify the job of removing it. Price 75 cents.—American Bureau of Engineering, 601 South Michigan Avenue, Chicago.

PROTECT-A-MOTOR

The purpose of this device is to automatically stop the motor when the supply of lubricating oil is exhausted or the oil pump fails to function. It is an automatically controlled valve which is installed in the fuel line near the carburetor, the cut-off valve being controlled by the oil pump. Should the supply of lubricating oil become exhausted or the oil pump fail to function, the valve immediately closes. Price \$20.—Protect-A-Motor Sales Co., Kansas City, Mo.

HB AUTOMATIC AIR OUTFIT

All gears, pulleys and belts have been eliminated in this electrically driven air compressor. The air pump is built directly on the shaft of a low-speed ball-bearing motor. The pump operates in oil. The outfit is absolutely automatic, starting and stopping itself and maintaining a constant pressure between 150 and 200 lb.—Hobart Brothers Co., Troy, Ohio.

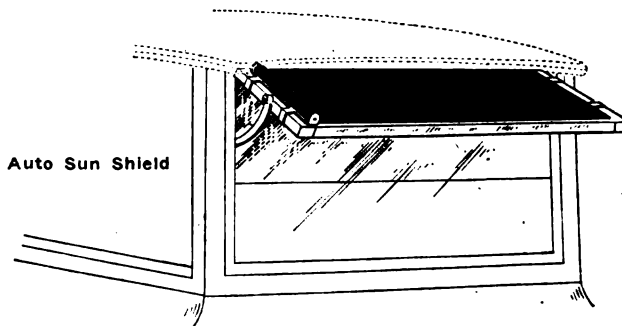
WILSON-BUILT TRUCK CABS

These cabs have been standardized and are made for the following sizes of trucks: 1, 2, $3\frac{1}{2}$ and 5 tons. They are built in either the open or enclosed type. The open cabs have swing doors and curtains, and the enclosed cabs sliding doors and glass windows. The cabs are shipped knocked-down. They are finished with a priming coat of paint so that they are ready for the final finish when they are set up.—C. R. Wilson Body Co., Detroit.

AUTO SUN SHIELD

This shield is especially designed for use on a three-piece windshield. It consists of a roller curtain which is clamped on one end of the upper section of the windshield. When it is to be used the curtain is drawn across and hooked on the opposite edge of the windshield. It is easily attached and detached. All metal parts are nickel plated and the sun shade itself is finished in green on the under side and black on the upper side. Price \$9.75.—The Auto Sun Shield Corp., 380 Main St., East Orange, N. J.

Auto Sun Shield



Buick Four Now a Reality

**Rumors Among the Trade for a Long Time Confirmed in
Creation of Smaller Model to Sell for \$975 in Touring
Body—Design Very Close to Present Six**

FOR quite a long time there have been rumors that the Buick line would some day again include a four-cylinder chassis, and like many rumors that will not down, this one proved to be true, for Buick has released the details on the four-cylinder job that has been under way at the factory for some time.

In general appearance, the new model is all Buick. That is, the lines of the bodies and the general appearance would indicate to even those slightly acquainted with the line that it is a Buick product, and the novice might even be at a loss to say whether it was a four or a six as with the reduction in size of all dimensional parts of the exterior, the hood still is elongated enough to prevent the appearance of being cut off for the smaller engine.

There are four bodies in the line: a touring at \$975, a roadster at \$935, a coupé at \$1,475, and a sedan at \$1,650.

How the Buick Four Compares With the Buick Six

Four		Six
\$975	Touring Car	\$1,525
\$935	Roadster	\$1,495
\$1,475	Coupe	\$2,135 and \$2,325*
\$1,650	Sedan	\$2,435 and \$2,635*
109 in.	Wheelbase	118 and 124
Four	Engine cylinders	Six
$3\frac{3}{8} \times 4\frac{3}{4}$ in.	Bore and Stroke	$3\frac{3}{8} \times 4\frac{1}{2}$ in.
31×4 in.	Tires	33×4 and $34 \times 4\frac{1}{2}$ in.
*Depending on wheelbase.		

of the engine is nearer the larger model than the S. A. E. horsepower rating would indicate, as this formula is based on the bore alone and does not consider the stroke which actually has considerable to do with the actual brake horsepower.

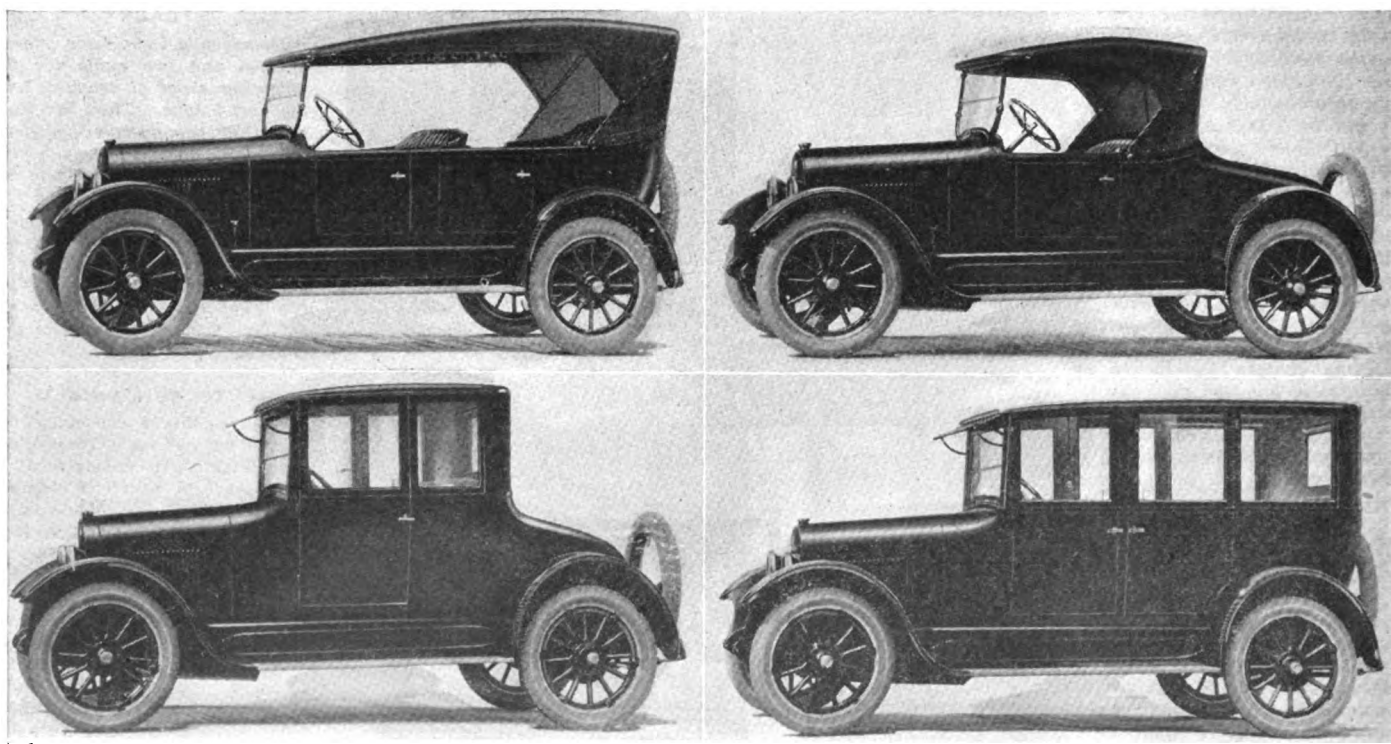
Engine

A detailed study of the four-cylinder car shows that all of the experience gained during the last few years on the six has been fully realized in the design and construction of this four. The overhead valve construction with detachable cylinder head is in accordance with up-to-date practice, and this is further augmented by the adoption of a new automatically heated intake manifold and a particularly accessible layout, as far as service problems are concerned. From a performance standpoint, the new model should provide all that is desirable in any part of the country, whether it be

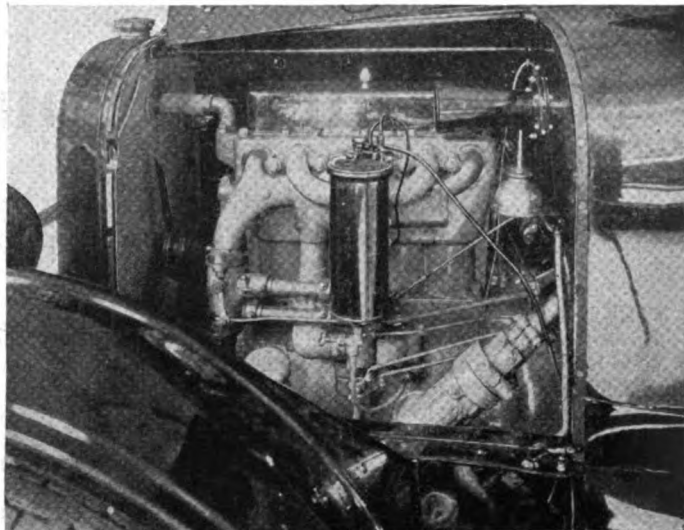
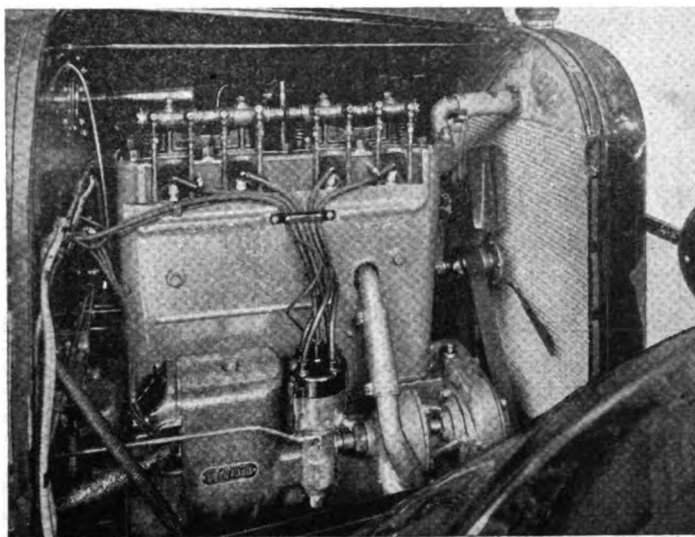
The mechanical details of the chassis are patterned closely after the Six, and but few changes have been made in design. The most notable change is the elimination of the valve cages and the valves are contained directly in the cylinder head, operating in pressed-in guides. While the bore is the same as the six, the stroke is slightly longer so that the piston displacement per cylinder is slightly larger and therefore the power

struction of this four. The overhead valve construction with detachable cylinder head is in accordance with up-to-date practice, and this is further augmented by the adoption of a new automatically heated intake manifold and a particularly accessible layout, as far as service problems are concerned. From a performance standpoint, the new model should provide all that is desirable in any part of the country, whether it be

Four Bodies on the New Buick Four Chassis



The lines of the body are distinctively Buick and resemble Six features very closely.



Right and left sides of the Buick Four engine with detachable head

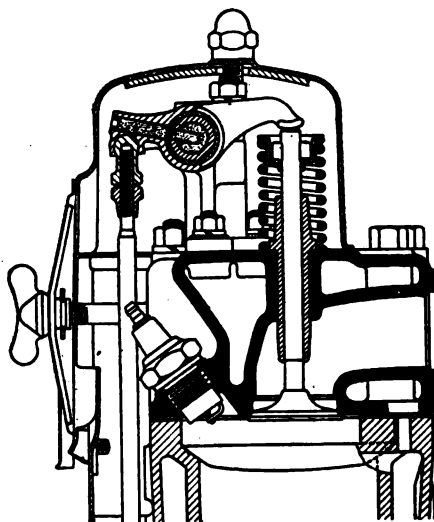
hilly or flat. With a brake horsepower of 35 to 40 and a shipping weight on the touring car of 2380 lb., a ratio of about 60 lb. of car weight to the horsepower is provided. Owing to the overhead valve construction and combustion chamber layout, the torque characteristics of the engine are extremely good at low speeds, giving a much greater value to this high power to weight ratio. In order to secure suitable performance, it is not necessary to utilize an excessive gear ratio. The final reduction is 4.6 to 1 for all models. This is the same ratio that is used in the five-passenger, six-cylinder car and less than is used in the seven-passenger touring, which is geared at 4.9 to 1. This comparison, of course, must be taken into consideration with the fact that the tires on the four-cylinder are 31 in. in diameter and on the five-passenger six 33 in., and on the seven-passenger six 34 in.

The main body of the engine is a three-casting unit, the cylinder head, cylinder block and upper half of the crankcase being individual iron castings. The lower half of the crankcase is a pressing forming the oil pan, and above the cylinder head is a stamped cover plate which houses the rocker arms and the remainder of the overhead valve mechanism. The four cylinders are cast in block and have a bore and stroke of $3\frac{1}{2}$ by 4 in. This provides an S. A. E. horsepower rating of 18.23 and a displacement of 170 cu. in. The cylinder block is a remarkably simple casting consisting only of the cylinder barrels and water jacketing for the upper part of the block. The manifold and valve guide retainers are cast in the cylinder head.

The piston is cast iron and is of the three-ring type with all three $\frac{3}{16}$ in. rings located above the wrist pin. Below the bottom ring there is a wiper groove so designed that it will pick the oil off the wall of the cylinder and lead it to the wrist pin bearing. The wrist pin bearing is located in the upper end of the connecting rod and the piston pin is offset $\frac{3}{32}$ of an in. towards the camshaft, this being identical with the practice followed in the six-cylinder model.

The connecting rod is 12 in. in length, this being unusually long for this size engine.

The entire valve layout for this engine is very similar to that utilized on the Buick six. The camshaft drive is by helical gear. The cam followers are of the roller type, acting against push rods which carry a mushroom-shaped spring retainer at the lower end. The tappet guide contains a coil spring which assists in the function of keeping the roller follower in close contact with the cam and acts as an auxiliary to the valve spring. The push rods have a ball and socket connection at the rocker arm or upper end, with an adjusting means fitted on the threaded portion of the rod at the upper extremity. The ball is a hardened and ground surface to eliminate wear. The rocker shaft is supported on the cylinder head, the rocker arms bearing with a rocking chair motion on the upper end of the vertical overhead valve stem. The valves are directly in the head and are accessible for grinding, etc., by removal of the head, which is accomplished readily by taking off the cylinder head stud nuts.



The removable valve cage has been eliminated and the valve seats directly in the detachable head

The valve system is all typically Buick, having the characteristic of having larger intake valve than exhaust valve. The clear diameter of the inlet valve is $1\frac{1}{4}$ in. and of the exhaust valve $1\frac{1}{8}$ in. These are larger valves than those employed in the six-cylinder car, although the displacement per cylinder is very closely the same. The valves for the six are $1\frac{1}{8}$ in. for the inlet and $1\frac{1}{4}$ for the exhaust. The valve lifts for the new four-cylinder engine are $\frac{21}{64}$ in. for the inlet and $\frac{5}{16}$ in. for the exhaust, both exhaust and inlet have the same stem diameter of $\frac{3}{8}$ in. The material of the inlet and exhaust valve head is cast iron and of the stem carbon steel. The valve spring pressure is 76 to 85 lb., this being the same that is employed on the six-cylinder car. The valve timing is also identical with the six, the inlet opening being 22 deg. 10 min. after upper center and closes 45 deg. 10 min. past lower center. The exhaust opens at 53 deg., 50 min. before lower center and closes 9 deg. 10 min. after upper center. The firing order is 1-3-4-2. This timing, in conjunction with a 74 lb. per sq. in. gage compression pressure, indicates the high speed characteristics of the engine. The early opening of the exhaust valve, namely, 53 deg. 50 min. before lower center, is particularly characteristic of the up-to-date type of high-speed engine and is about 8 deg. earlier than the average timing for passenger car engines.

Oiling is by circulating splash system, the gear pump being located in the oil pan and driven directly from the camshaft. The pump is so constructed that it may be dropped out vertically for cleaning or inspection, and is entirely exposed to view when the bottom pan is dropped. The capacity of the oiling system is 4 qt. The crankshaft and main bearings, as well as the timing gears, are taken care of by the circulating system, and the cylinder walls and other internal parts are taken care of by the splash thrown up by the scoops on the lower end of the connecting rods.

The gasoline system comprises a 10-gal. cylindrical tank mounted at the rear
(Continued on page 32)

New Durant Four in Production

Mechanical Details Practically Decided On and Touring Models Coming Through at Long Island Assembly Plant

INTEREST in the plans of W. C. Durant has naturally risen from the time he severed his connections with General Motors till now, as the first cars are about to be placed in the hands of purchasers, the complete details of the new creation are available. In the assembling plant at Long Island City the first ten cars are, at the present writing, being put through for distribution in the New York district, and while there have been several changes of a minor nature in the design, the general construction remains as at first laid out and published in Motor World.

The chassis is built around the idea of a rigid frame that will have the minimum amount of weave. To carry out this idea several departures from conventional design are made use of. In the first place, there is a tubular member of heavy steel extending between a cross member behind the engine and in front of the gearset and the rear cross member. This tube is flanged at both ends and the flanges are rigidly bolted to the members. The effect of this rigid brace at a distance from the center of the frame is to eliminate the possibility of frame twisting, ordinarily possible through flexibility of frames and the slight motion at the rivets. In addition to acting as a brace, this device also acts as a muffler and exhaust pipe, the exhaust pipe from the engine entering the front end of the tube about 18 in., being perforated and plugged at the end. There are no baffle plates of any kind and there is no tail pipe, the rear end of the tube being covered with a plate which has a louvered opening at the bottom. As a silencer this device is

said to be the equal, if not the superior, of a baffle plate muffler.

The engine is made by Continental to Durant design and is special in many respects. The valves are of the overhead type operated by rocker arms and long push rods at the side. The valve mechanism is fully enclosed. The bore is 3½ in. and the stroke 4¼ in., giving an S. A. E. rating of 24 hp. The exterior of the engine is remarkably clean, the only visible objects being the water pump, ignition and starting and lighting

a sump only. It is of sheet steel and can be easily removed. The connecting rods and pistons can be taken out through the bottom of the engine, as there is sufficient clearance for this.

Lubrication is by a circulating splash system, the oil being moved by a gear pump, which is one of the few things showing outside the engine line. This pump is driven by a flexible coupling.

The generator is mounted directly on the back of the gear cover, carrying its gears on ball bearings and being driven from the camshaft. The starting motor acts on the flywheel teeth through a Bendix drive. All wiring is carried in flexible tubing. The storage battery is held on a sort of step back of the cross-frame member that carries the gearset, and in addition to this is strapped to the member with a steel strap and a bolt so that the battery is very securely held in place but can be almost instantly taken out, if necessary.

The engine is four point supported, each of the supports being a bolt to a cross-frame member. The layout of the parts is such that the engine can be taken out of the chassis without disturbing other parts or removing the body, dash or cowl.

With a practically rigid frame, it is possible to rearrange the power transmission units somewhat, and looking to the service and maintenance of the car, the gearset and clutch have been installed in such a way that either one may be removed without disturbing the other. The clutch is housed in the flywheel. The clutch is of the single plate type and the plate is somewhat of a departure from accepted design in that it is slotted at the outside to allow for expansion under heating. On either side of the plate are floating asbestos fabric rings, and the clutch cover carrying the multiplying levers bolts to the outside of the flywheel in the ordinary way.

Between the clutch and the gearset are two Thermoid fabric universal joints with a short shaft to allow for any possible misalignment and the small amount of motion which will necessarily be present even with the rigid frame. The removal of this short shaft allows the clutch to be disassembled.

The gearset, which is of Warner make and which provides three speeds forward, is mounted on a cross-frame member, and behind this is the propeller shaft fitted with two Peters universals and a slip joint at the front end. A Hotchkiss form of drive is utilized.

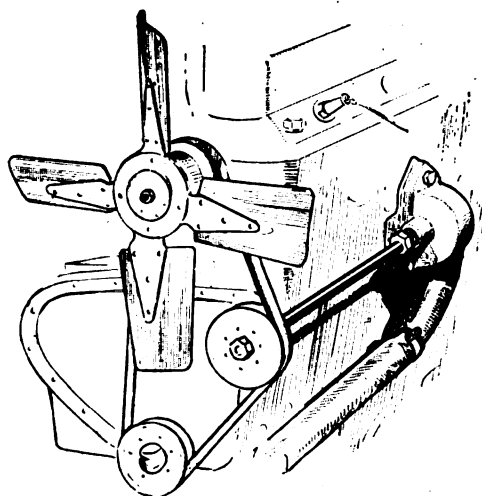
The rear axle, of the three-quarters floating type, presents several novelties. It is made to Durant design by the Adams Axle Co., and is fitted with Timken roller

Durant Specifications

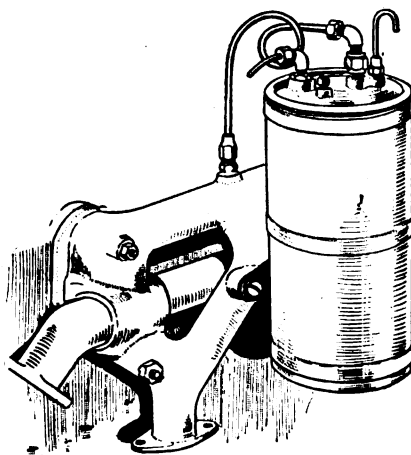
Price—Touring car, \$890.
Wheelbase—109 in.
Engine—4 cylinders, 3½ x 4¼ in.
Carburetor—Tillotson.
Fuel feed—Stewart.
Starting and lighting—AutoLite.
Clutch—Single plate.
Gearset—Warner three-speed.
Universals—Thermoid and Peters.
Rear axle—Adams with Timken bearings.
Weight—2250 lb.
Tires—31 x 4 Goodyear.
Chassis lubrication—Alemite.

members. Water circulation is by centrifugal pump, and this pump is half buried inside the waterjacket line.

The crankshaft is of the three bearing type and not only all the bearings but also all the other necessary fittings are mounted in the upper half of the crankcase leaving the lower half with its troughs, for the connecting rod dips as



A triangular belt arrangement drives both fan and water pumps



The vacuum tank is mounted directly on the manifold, which is of unusual design

bearings. Adjustment is possible at the outer ends of the shafts and in the wheels. In addition to this, there is a bronze filler plug inside the rear hub caps, and this is drilled and tapped so that by turning a bolt into the hole the rear wheels can be removed and so the wheel puller is carried right along all the time. Removal of this filler allows access to the axle nut which, of course, is removed first.

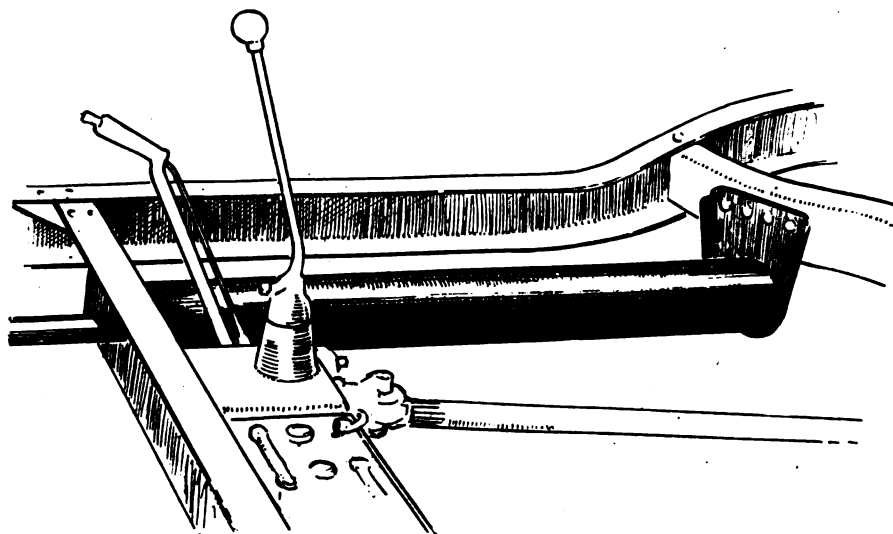
The brakes are of the external and internal type, both operating on the same drum, which is 12 in. in diameter. The inside band is 1½ in. wide and the outside band 2 in. wide, so that a braking area of nearly 800 sq. in. is obtainable. Brake adjustment has been made very accessible, especially on the service set, a small thumb lever which is easily reached from between the spokes of the wheels.

The wheels are of the artillery type with wood spokes, but an innovation is the use of a steel felloe. Demountable rims are fitted and the tires are 31 x 4 in., Goodyear—all weather tread in the rear and ribbed tread in front. A spare tire is carried on the rear, the carrier being mounted on the rear frame cross member, which is wide and gives exceptionally good support for this member, which has given more or less trouble from vibration in the past.

Incidentally, the gasoline tank is suspended just beneath this cross member. The capacity is 13½ gal. and feed to the carburetor is by a Stewart vacuum system.

The springs are semi-elliptic all around, the front set being 34 in. long and having five leaves, and the rear set being 48 in. long and having seven leaves.

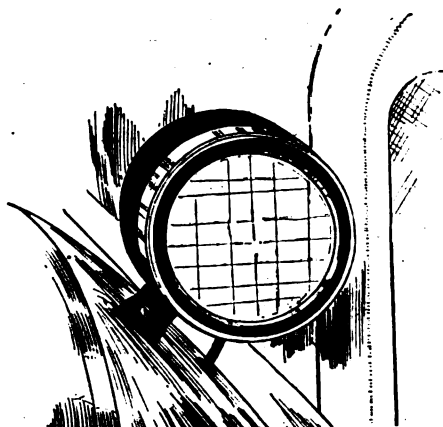
Chassis lubrication is by Alemite system throughout with the exception of the front bushings of the rear springs. Owing to the inaccessible position of these, pipe fittings bring the oiling spot into the floor of the tonneau. The clutch throwout collar is of more or less spherical shape, so that it retains sufficient lubricant to last for from three months to a year depending on the



The torsional tube which not only prevents frame wear but also acts as a muffler

amount of use given the car.

At the present time only the touring

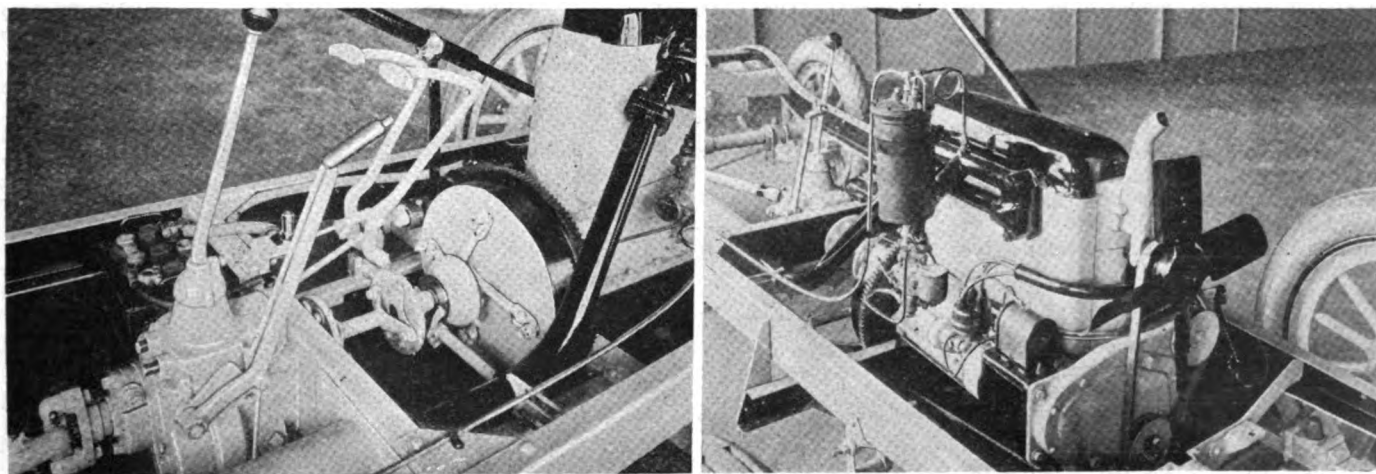


The barrel type lamps are fitted with approved lenses

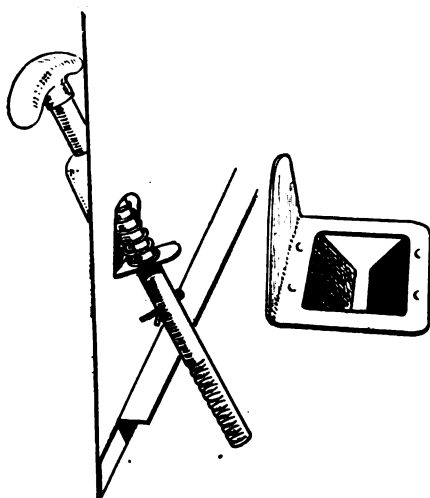
coupe bodies will be under way. The touring body is true streamline form. Owing to the placing of the gearset at a distance back from the engine, it has been possible to give plenty of leg room in the driver's compartment and still allow ample room in the tonneau. The steering gear is set at an unusually low angle so that the steering wheel gives more the effect of being vertical than horizontal. The spider of the wheel also is out of the ordinary in that the aluminum spokes extend only about one-third the way out, the other two-thirds being walnut laminated and dovetailed into the rim itself, which is also of walnut.

The upholstery is in genuine leather and the springing is novel. A netting of fine mesh somewhat similar to the coil bed spring familiar to all, covers the conventional coil springs so that the pressure of the springs is distributed and the padding is less liable to become lumpy. The door pockets or flaps consist of sheet steel covered with leather, and the rear deck of the top is double so that the straps are concealed. When

body is being turned out, but in the fall it is expected that roadster, sedan and



The Durant Four—At the left is shown the gearset mounted on a separate cross member. The right view shows engine and manifold mounting



The hood fasteners are quick acting and simple

Buick Four Now a Reality

(Continued from page 29)

of the chassis beneath a sheet steel cross-member, from which the gasoline is drawn to a vacuum tank on the dash and fed by gravity to the Marvel carbureter. The carbureter size, location and general type is identical with that of the six-cylinder car. A damper controls the quantity of exhaust heat utilized, and it is interconnected with the throttle, giving more heat at low and increased heat at high speeds.

The cooling system comprises a square cellular radiator having a water capacity of 3½ gal., and is fed by a centrifugal water pump driven off the generator shaft. Cooling is assisted by a 16-in. three-bladed sheet steel fan driven by a 1¼-in. flat belt.

Clutch and Gearset

The clutch is a multiple dry-disk having eight blades. The size of the facing rings is 5½ in. internal diameter and 7½ in. overall diameter, giving a total surface area of 148.4 sq. in. This delivers the drive to a three-speed, selective sliding gearset mounted as a unit with the powerplant.

The remainder of the drive consists of a solid propeller shaft with two universals. The front universal joint is directly connected to the rear end of the gearset and has an automatic oil level, allowing it to be lubricated directly from the gearbox. The rear axle is a three-quarter floating type with a malleable iron housing. The final drive is through spiral bevel gears, the reduction being provided by 42 teeth in the ring gear and 9 in the driving pinion. The bevel pinion shaft is mounted on two New Departure bearings. The differential bearings are Hyatt in connection with a ball thrust. The axle shafts are chrome nickel steel.

The suspension of the car is on semi-elliptic springs, the rear spring being 55½ in. long and 2 in. wide. The front spring is 36 in. long and 1¼ in. wide.

the top is up, the top bow rests are removed and carried in the pocket of the car, but when necessary to use them, they are easily put in place behind the gypsy curtains.

The runningboards are of aluminum covered with a composition, and a feature of the fastening is that instead of the bolts going through the boards they fit into slots so that the bolts can be removed without removing the covering. The front ends of the runningboards are supported on an extension from the sub frame member that carries the pedal shaft.

The instrument board is of sheet steel finished like Circassian walnut, and carries the switch, speedometer—which, by the way, is driven from the rear of the gearset—the ammeter, and there is sufficient room for the mounting of additional equipment.

The spring eyes are all bronze bushed and all provided with the Alemite attachment, this type of lubrication being utilized throughout the chassis. The brakes are external and internal on a common drum located on the rear wheels. The drum diameter is 11 in. and the width 1½ in. This provides an area of 111 sq. in. on the foot brake, which is the external, and 86½ in. on the hand brake, which is the internal. The internal diameter of the drum is 10 11/16 in. The steering is a Jacox, screw and nut design. The steering wheel is 17 in. and is provided with the usual spark and throttle connection.

Electrical System

Electrically, the car is completely Delco, the distributor is a unit with the generator and the starter reduction 23.8 to 1. The generator speed in relation to the crankshaft is 1.5 to 1. The battery provided is an Exide, three cell type with a 6-8 voltage. The head lamp candlepower is 21 and the dimmer is regulated by a coil on the switch. A 5-candlepower tonneau lamp and 2-candlepower tail and dash lamp are provided. The battery capacity is 80 amp. hr. at the 10 amp. discharge rate.

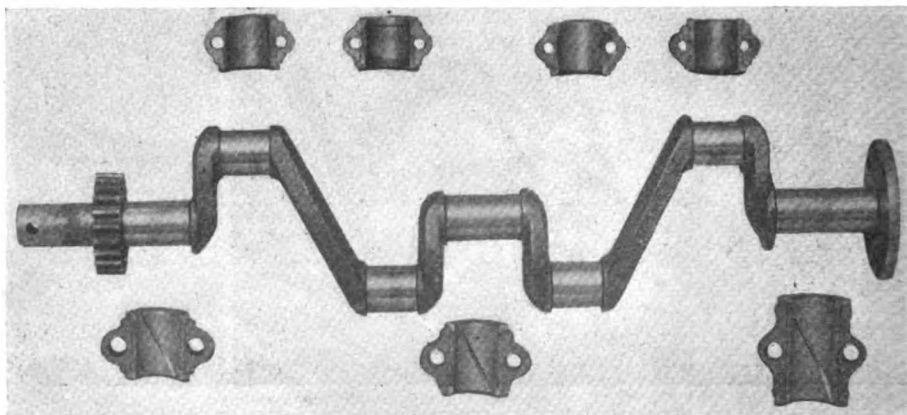
All of the bodies are of the low hung type giving the impression of length to the cars. Inspection of the body makes it difficult to believe that the wheelbase on this chassis is only 109 in. A turning radius of 36 ft., however, is secured with this short length. The seating capacities of the bodies are all fully up to their rating. The roadster has a two-passenger capacity, the touring car five, coupe three and sedan five. The standard color is black with a white stripe around the top of the body on the open models. The enclosed cars are equipped with adjustable windshield visors, a windshield cleaner, dome light, ventilating windshield, adjustable windows and sun shades for the rear windows. All models are equipped with non-glare headlight lenses, and all are provided with a tire carrier and extra rim. The upholstery on the open models provides genuine leather for the seats and backs and on the enclosed models a rich worsted material is standard. On the touring car, as an example of the seating allowance, the inside seat width in the rear is 46 in. and the front 39 in.

New Self-Lubricating Bearing Material

A NEW self-lubricating bearing material, known as Genelite, has been developed by the General Electric Co. It consists of a mixture of bronze and graphite, the latter constituent representing approximately 40 per cent of the total by volume. It has a high degree of porosity, and this characteristic is made use of in high speed applications where oil is applied to the outside of the bushing and carried through to the bearing surface by capillarity. It is also claimed that bearings of this material will not freeze.

Genelite is especially adapted for use in bearings that are inaccessible, and which the owner is consequently prone to neglect.

In manufacturing this bearing material, the ingredients are mixed in a powdered form, heated, and then pressed as nearly as possible into the shape in which it will be used. It is then baked. The finished dimensions are obtained by grinding, as it cannot be machined.



Ford crankshaft fitted with Genelite bearings

THE LAW

By GEORGE F. KAISER

Perplexed?

Does some point of law perplex you?

Why don't you ask MOTOR WORLD's legal editor to discuss the question?

Garageman Negligent When Car Froze, Court Holds

Prescribed as Seasonable Summer Reading by the Legal Editor

As a seasonable topic for mid-summer reading this department presents here a case where a garageman was sued by a customer whose car froze up while in the former's public garage.

The Supreme Court of Oregon in this case, when it came up on appeal, said that there is no presumption that the custom of the garagekeepers of Portland in failing to drain water from automobiles left with them for storage, was binding on their customers, and a showing by a customer that his car had frozen up made out a prima facie case of negligence against the garageman.

Suit was started by a man named Simms against another named Sullivan doing business as the Fashion Garage of Portland. Judgment was rendered in favor of the garageman, but when Simms appealed, the judgment was reversed.

It appeared that on Nov. 27, 1919, Simms left his car at the Fashion Garage, Portland. This was a public garage conducted for the storage of automobiles by L. I. Sullivan. By the acceptance of the car upon the part of Sullivan, the relationship of bailor and bailee for hire was established between the parties hereto.

Simms asserted that Sullivan did not take due and proper care of the said automobile, but, on the contrary, that he exercised so little care of the vehicle that the cylinders, radiator and gasket were thereby broken, and greatly injured.

After admitting and denying certain allegations of the complaint, Sullivan, by way of further and separate answer, alleged that:

"* * * On or about the 27th day of November, 1919, Simms, well knowing the premises and garage of Sullivan's and the condition thereof, * * * made application to Sullivan for a place to store his automobile, and he and Sullivan agreed that Sullivan would rent him a space for his automobile for the sum of \$7.50 per month, * * * and that the only service which he (Sullivan) agreed to render was that Simms had the right to leave his automobile in Sullivan's garage, and that he would render ordinary care in preserving same safely from loss or damage, and it was at all times understood and agreed that Simms took the storage in the condition it then was, and that in case of any loss from the elements or acts of God, or any other than the ordinary care necessary, that Sullivan would not be responsible therefor, and Sullivan did all the things which he agreed to do, and the loss, if any, was sustained by reason of the acts of God,

on account of the freezing of the water in the radiator."

The matter alleged in the foregoing paragraph was denied by Simms. During the course of the trial, the court admitted testimony of a local custom among the garagekeepers of Portland, over the objection of Simms on the ground that the asserted custom had not been pleaded.

Trial by jury was waived and the issue of fact determined by the court. Based upon the findings made and the conclusions of law drawn therefrom, the complaint was dismissed.

The Supreme Court in its opinion said:

Simms alleges that the court erred in allowing the introduction of evidence as to the existence of a local custom among garagekeepers of the city of Portland. There was no allegation of any particular custom contained in the pleadings. At the trial a number of garagekeepers were permitted to testify that a custom existed among the keepers of garages at Portland to the effect that the storage of an automobile did not contemplate or include the duty of removing the water from the radiator.

It is a familiar rule of pleading that the issues in each case are confined to those made by the pleadings and, in the trial, the evidence adduced should be limited to support the issues thus made.

Sullivan, by his answer, gave notice to Simms that his defense was based upon a specific contract. On the trial the defense was founded not upon the contract pleaded, but upon local custom. Sullivan undertook to excuse the full measure of responsibility that the law of bailment places upon him by showing local custom among the garagekeepers of Portland. Simms objected, upon the ground that the custom was not pleaded. The weight of authority supports the general rule that evidence of a particular custom of usage such as was sought to be established by Sullivan in any special line of business is not admissible, unless such custom or usage is specially pleaded. Some cases recognize exceptions to the general rule, but it is not necessary to refer to them here.

As a rule, local usages and customs are facts which must be averred and proved in the same manner as any other material fact connected with the subject of litigation. According to the weight of the decisions, whenever a special custom is relied upon to take a case out of the general rule of law, such customs must be specially pleaded, and cannot be shown under the general issue of general denial.

Furthermore, it is a well-established principle of law that—

"In the absence of evidence that the party to be charged had actual knowledge of a

trade custom or usage, it must, in order to be admissible against him, appear to have been so general that he will be presumed to have knowledge of it. * * * As will be seen, knowledge of a usage is necessary in every case, in order to bind a person by its terms. Sometimes this knowledge must be expressly proved, and sometimes, from its generality and notoriety, the law raises the presumption that the usage was known."

There is no general presumption that the custom or usage of the garagekeepers of Portland in failing to drain water from motor cars left for storage is known to persons who leave their cars for purposes of storage or for bailment. Before Simms can be bound by a local custom of garagekeepers, in the matter of the bailment of his car, he must have knowledge of such custom.

Valid usages, known to the contracting parties, concerning the subject-matter of the agreement, or usages of which the parties are chargeable with knowledge, are, by implication, incorporated therein, unless expressly or impliedly excluded by its terms, and are admissible to aid in its interpretation, not as tending in any respect or manner to contradict, add to, take from, or vary a contract, but upon the theory that the usage forms a part of the contract. But evidence of usage is not admissible to vary or contradict the terms of a plain, unambiguous contract, and in the more modern cases there has been strong judicial criticism of the tendency to resort to evidence of usage when to do so would indirectly control the true intention of the parties to contracts. However, it has been held that, where evidence of custom or usage is offered for the purpose of showing what is merely incidental to an implied contract, and relied upon only as evidence of some fact in issue, it need not be pleaded.

In the case at bar the court committed error by admitting evidence of the particular custom of the garagekeepers. It has been decided that—

"A custom of garagekeepers contrary to the implied obligation of reasonable care for safekeeping, arising in favor of an automobile owner by the storing of his car at a public garage, cannot absolve the garagekeeper from observance of such care."

This court has said:

"A bailee for hire cannot by contract so limit his responsibility to the bailor as not to be liable for his own negligence or the negligence of his agents and servants."

Another assignment of error in the instant case relates to the introduction of evidence in support of Sullivan's allegation as to the condition existing in its garage in which Simms stored his automobile.

"A garage keeper storing a car of another for compensation is classed as a bailee for hire, and as such he is bound to furnish reasonably safe accommodations and to exercise reasonable care and prudence to keep the machine in a safe manner. If guilty of negligence resulting in injury to the machine, he may be charged with the damage. The liability of a garage keeper for hire is not affected by reason of the knowledge of the

(Continued on page 38)

Detroit's July Output Shows Gain

INCREASES REPORTED IN NEARLY ALL PLANTS

107,132 Total Ford Output— Some Companies Will Con- tinue Present Schedules

DETROIT, Aug. 9—Production in a majority of Detroit plants for July shows a general increase over June, and schedules for August indicate a continuance of the present output. The Ford Motor Co. closed the month with a total production of 107,132, about 5 per cent to 6 per cent of which were trucks. This was slightly under the schedule outlined, due to manufacturing conditions only. In August the company is adhering to its 109,000 schedule. There is no curtailment in sight as sales are running as far in advance of production as formerly.

Studebaker at Capacity

Studebaker is running to capacity. July production totalled 8100 in all models, which is as many as the company can build. August will witness the same output. Unfilled orders under present schedules can't be brought down at all.

Buick is going to build 11,750 cars in August, which includes both the new Four and the former models. This will be within 250 of the biggest month the company ever had. July production ran between 9000 and 10,000, which is big business.

Hudson-Essex in July ran at about 60 per cent of its 1920 business. This same rate in August will mean 75 per cent of its 1920 business. "Sales are holding up beautifully," is the factory statement, and while conditions are admittedly peculiar, the companies are confident of plenty of business ahead.

Cadillac Going Strong

Cadillac business is running at the rate of 80 to 100 cars a day. Production in July was slowed somewhat owing to moving operations, which are now completed with all equipment installed. The company will devote all of its labor in August to car production. The sales outlook is considered especially bright.

Maxwell and Chalmers produced 1085 and 257 respectively in July. With Maxwell this represented an increase from 878 in June. Chalmers showed a falling off. Production in August will be based upon business conditions and will adhere to approximately the same schedule shown in July.

Packard business in July showed an increase in Twin Six sales, ascribed at the factory to the cut in prices. The single Six business approximated that of June. Production will continue at the same rate in August. The factory reports little business in trucks.

WILLYS FULFILLS PROMISE; PAYS \$2,000,000 DEBT FROM SURPLUS

NEW YORK, Aug. 9—Fulfilling the promise made a short time ago by John N. Willys that a part of the cash surplus of the Willys-Overland Co. would be used on Aug. 1 to make a substantial reduction in the corporation's bank indebtedness, 10 per cent of the bank claims were paid on that date. The obligations of the company to bankers approximate \$20,000,000. The payment, therefore, was about \$2,000,000. This will leave a substantial amount of cash on hand.

Oldsmobile business ran at about 70 per cent of normal capacity. Production in August will be at about the same rate as in June and July.

Dort reports business in July as running at about 1500 cars. In making comparisons the company, through President Dort, declared business is running in excess of 1919, which it considers a busy year. The company declares business best in big industrial centers.

Hupp in July turned out 1925 cars, or 175 more than in June. The outlook for August is satisfactory and schedules will be continued along present lines. Columbia business in July approximated 60 per cent of normal, keeping up with June rate.

Briscoe reports a marked improvement in July sales. The plant ran at about 50 per cent of normal. Many dealers and distributors were taken on by the company in July. Liberty business bettered June by 25 per cent. The company's new sport car is making its appearance.

Paige reported July as its biggest month since April, about 1200 cars being produced, which represented a 40 per cent increase over June. The company looks for good business in August, based on early orders and contracts.

Saxon business in July ran 20 per cent better than June. The company's new line is making good headway and it reports greatly increased interest on the part of dealers. Wills-Lee is running along at the same rate reached following the introduction of the car to the trade. Sales are steady and good business is looked for in August.

Willys Coast Men Convene

PORTLAND, ORE., Aug. 9—Branch managers of the Willys-Overland Pacific Co. held a conference in Portland last week, meeting at the home of Frank C. Riggs, general manager. Mr. Riggs recently suffered an injury to his knee.

NEW AUTUMN MODELS PLANNED IN DETROIT

Ford in Statement, Denies Re- port of Newly Designed Machine

DETROIT, Aug. 8—Many of the factories in the Detroit district are planning new models for appearance in the late summer and early fall months, but the Ford Motor Co. will not be one of them. A statement by the Ford company to-day says:

"Our attention has been called to recent newspaper articles to the effect that there is to be a new model Ford car on the market Aug. 15 with change in design, such as ventilating windshield and one-man top. As we do not contemplate any such changes and there is no foundation to the rumors circulating in this connection, we have no hesitancy in making a denial of the report."

Columbia Motor Car Co. will present its 1922 models on Aug. 15. The new line will embody many new features and is designed to meet the demand for cars along sport lines. New prices will be announced in connection with the new line.

Liberty Motor Car Co. is bringing out a new sport model which will soon be ready for delivery. Some of these are already moving, though the price has not been definitely fixed. This will be announced when general delivery starts.

Maxwell will meet the demand for cars of greater wheelbase and generally improved appearance by changing its line to a larger vehicle. Necessary changes in equipment are now being made at the factory and by early fall the company will be in production on the new models solely.

PRUDDEN WHEEL PLANT BEATS 10-HOUR RECORD

DETROIT, Aug. 9—Production in the Prudden unit of the Metal Wheel Corp. at Lansing on July 26 exceeded any previous 10 hour output. The biggest previous day was in May, 1920. The Prudden and other units of the corporation now are operating 10 hours a day, Saturdays off. The plants will be operated Saturdays this month if shipments are not delayed. Work has been held up recently by delay in spoke shipments from factories in the South.

The Michigan Screw Co. at Lansing reports better business in July than was anticipated. Several unexpected orders were received and the output was up to the 50 per cent mark the entire month. Operations are expected to slow up this month, but prospects are bright for the fall.

Pennsylvania Opens A. E. A. Week

JOBBER PREPARE WAY FOR SALES PROMOTION

Hear Inspirational Talks Following Dinner—Outline Active Program for Week

PHILADELPHIA, Aug. 5—Jobbers of the eastern Pennsylvania district successfully launched their part in the national sales promotion movement of the Automotive Equipment Association at a dinner to-night. Upwards of 150 proprietors, executives and salesmen of nine jobbing houses met at the rooms of the Automobile Trade Association and after their repast listened to four inspirational and informative addresses on the opportunities offered jobbers and their salesmen to increase their own profits and those of manufacturers and retailers by aggressive participation in the sales promotion campaign.

One of the speakers was Harry C. Spillman of the Remington Typewriter Co. educational department, who in the main repeated the brilliant talk on development of personality which he made at the Mackinac Island convention of the Automotive Equipment Association. E. J. Cattell, city statistician of Philadelphia, talked on the mental and moral qualities necessary to successful salesmanship.

T. F. Cullen, managing editor of the Automobile Trade Journal, spoke of the need for a campaign of education throughout the trade and suggested methods of participation in it by jobbers and their salesmen.

Neal G. Adair, editor Motor World, basing his talk on observations recently made in trips with jobber salesmen and in investigations of accessory selling activities of dealers and garagemen, outlined a program of activity which would enable jobber organizations to attain momentum in the sales promotion movement prior to issuance of detailed instructions for the work from association headquarters.

Dinner Opens Way

The meeting, held on the eve of Sales Promotion Week, was intended to prepare the way for intensive resale merchandising activities during the week of Aug. 6-13 among the customers of the eastern Pennsylvania jobbers. The salesmen present agreed to devote much of their time during the week to showing retailers how to sell dominant lines of accessories. This action was taken in compliance with a request from Ray W. Sherman, merchandising director of the Automotive Equipment Association, who telegraphed his regrets over his inability to be present. Robert A. Strahan, president of the association, sent

FORMER PURDUE INSTRUCTOR NOW SERVICE MANAGER IN WISCONSIN

MILWAUKEE, WIS., Aug. 8—Alvan Zitner, formerly instructor in the motor division of Purdue University, is now manager of the service department of the Bower City Implement Co. of Janesville, Wis., which specializes in selling and servicing the Samson tractor and Janesville tractor implements, manufactured at Janesville by the Samson Tractor Co. During the war Zitner was in the motor transport service and achieved the distinction of obtaining a perfect mark in a difficult test based on motor ignition problems.

a telegraphic message of encouragement and approval of the Pennsylvania jobbers' activity.

Jobbers participating in the meeting were: Gaul, Derr & Shearer Co., J. H. McCullough & Son, George W. Nock Co., Cahall Motor Supply Co., Berrodin Rubber Co., Manufacturers Supplies Co., Roberts Electric Supply Co., Standard Supply & Equipment Co., all of Philadelphia, and General Auto Supply Co. of Lancaster.

KEYSTONE MOTORS OPENS NEW INDIANAPOLIS HOME

INDIANAPOLIS, IND., Aug. 8.—Keystone Motors Co.'s new Indianapolis showroom has opened with a special display of the newest Briscoe models. The Keystone Motors Co. is operating branches at Cincinnati and Louisville. Service stations have been established throughout Ohio and Kentucky, and plans are now under way which, when completed, will mean Keystone service stations strategically placed through the States of Indiana, Ohio and Kentucky.

Hunt Resigns from Reo

NEW YORK, Aug. 8—James J. Hunt, vice-president and general manager of the Reo Motor Car Co. of New York, has tendered his resignation, effective Sept. 1. Hunt has not been in the best of health lately and plans to take an extended vacation before entering active business again. He has been with Reo in the New York territory since 1915.

Ford After Shipyard

BOSTON, Aug. 5—The Ford Motor Co. may buy the Victory plant at Squantum, an emergency shipyard, if Mayor Bradford of Quincy is successful in completing negotiations on behalf of the Government.

RICKENBACKER TAKES OVER EVERIT PLANT

Will Bring Out New Car at New York and Chicago Shows Early in 1922

DETROIT, Aug. 8—Rickenbacker Motor Car Co., the latest entrant into the Detroit automotive field, will take over the Everit Bros. plant in from sixty to ninety days and will at once tool up for production the first of the year. The first Rickenbacker cars will be exhibited at the New York and Chicago shows and at all leading shows of the season.

The Everit plant, which is owned outright by Byron F. (Barney) Everit, is turned over by him to the Rickenbacker company, of which he is president, for a consideration of \$2,000,000. One million of this is paid in stock of the new company and he has subscribed for \$1,500,000 more. In the incorporation of the company as filed here, Everit is shown as practically sole owner of the company's stock, but this later will be apportioned to the other men associated in the company, with Everit retaining control.

The automobile painting and trimming business of Everit Bros. will be removed to another plant in Detroit, for the purchase of which Everit is now negotiating. Three plants are under consideration, he said, one of which will be selected in the near future.

Sufficient Working Space

Present buildings of the Everit plant on Harper Avenue will afford the Rickenbacker company sufficient working space for the production of 20,000 to 25,000 cars a year. There is also unoccupied acreage included in the purchase to permit of tripling or quadrupling present capacity should it be required.

When the removal of the equipment of the Everit plant is started the installation of the Rickenbacker machinery will follow at once. This will be done rapidly, for the company has economized on time by having patterns made for the various equipment required, as the development of the car progressed. This has covered two years and ten months and the company is ready to-day with all its patterns for machinery and machine tools.

Every bit of the equipment will be specialized to the finest degree, according to the company's plans. Contracts for everything it will require are now being placed. It will start off the first of the year with an absolutely clean slate, all equipment and material bought at what Everit regards as absolutely bottom prices. In his opinion material prices are now as low as they will get.

MANY CHANGES AMONG DEALERS IN BOSTON

R & V Motors Will Run Agency As Branch—Kenworthy to Reorganize

BOSTON, Aug. 9—The R & V Motors Co. has taken over the business of the Boston agency and it will conduct it hereafter as a branch. J. A. Brough, for some years with the Chicago branch, has been sent here as manager and has taken charge of the business and will operate under the old name as the R & V Motor Co. of New England.

A reorganization of the Kenworthy Motors of New England is going on, which will be announced in a few days. The company has the New England distribution for the Columbia, and conferences have been going on at Detroit the past few days to bring about the change.

The Jeffery-Nichols Co. has taken over the Hall Motors Co. of Boston. The former company has the wholesale distribution for Hupmobiles and the latter had the Boston territory, but in order to effect a closer working organization it was decided to make the change. The new company has just signed up dealers in Springfield, Providence and other places.

Reed Takes du Pont Car

T. E. Reed, head of the Reed Motor Co., handling the du Pont car for New England, has taken on the Stephens "Salient Six," the agency of which was discontinued a few months ago by the Hennigan Motor Co.

There has been a reorganization of the Templar Motor Car Co. in Boston, and Frederick J. Caldwell, who has had it since the car was introduced in Boston, has sold out his interest. The new company will be conducted by Leo Weeder, who had been sales manager for Mr. Caldwell for some time. Many of the factory executives have stock in the new company.

The Hinchcliffe-Patterson Co. is the name of the newly reorganized company handling the Jordan for New England. Mr. Hinchcliffe has been the distributor since the Jordan entered New England, and Mr. Patterson for several years was with the Packard Motor Car Co. as a salesman. He bought an interest in the company and as an evidence of its success they have moved into new quarters on Commonwealth Avenue, taking over one-half of the big Garford Motor Truck building.

Jean Falk has sold out his interest in the Falk-Baker Co., New England distributor for the Saxon line. The business is being continued by S. E. Baker.

HARE'S MOTORS TO REMAIN AS TRUCK DISTRIBUTORS

NEW YORK, Aug. 9—Notwithstanding the impending reorganization of the Mercer Motors Co. and the cancellation by Hare's Motors of its contract with that corporation, Hare's Motors will not be dissolved but will continue to function as at present. It will continue as the selling agency for the Kelly-Springfield Truck Co., and probably for the Locomobile Co.

The arrangement with Locomobile will depend upon the decision of the creditors with regard to an extension of their claims pending a possible reorganization but it is considered practically certain such an agreement will be reached. The extension granted by Locomobile creditors expired July 31, but between 85 per cent and 90 per cent of the creditors already have agreed to a further extension which will run for at least six months.

There will be no change in the personnel of Hare's Motors, and even if it is found necessary to liquidate Locomobile it is expected that other lines will be added as opportunity offers.

Stockholders of Mercer Motors will meet Aug. 11 to pass upon the reorganization plan, and its ratification is regarded as certain.

EXPECT GEORGIA WILL RAISE MOTOR TAXES

Opposition of Dealers Will Be Overruled by Legislature, Is Belief

ATLANTA, GA., Aug. 9—In spite of the fact that the Georgia Automotive Dealers Association has been bitterly opposing any increase in taxes at this time, the Georgia Legislature will undoubtedly pass a bill soon which will increase taxes for automotive dealers in the State over the present schedule by approximately 25 per cent.

A bill to increase the tax on garages from \$25 to \$200 met with such bitter opposition that an amendment was adopted, setting the following schedules: Garages in cities of over 25,000, \$50; cities 20,000 to 25,000, \$35; cities 10,000 to 20,000, \$7.50; less than 10,000, \$5.

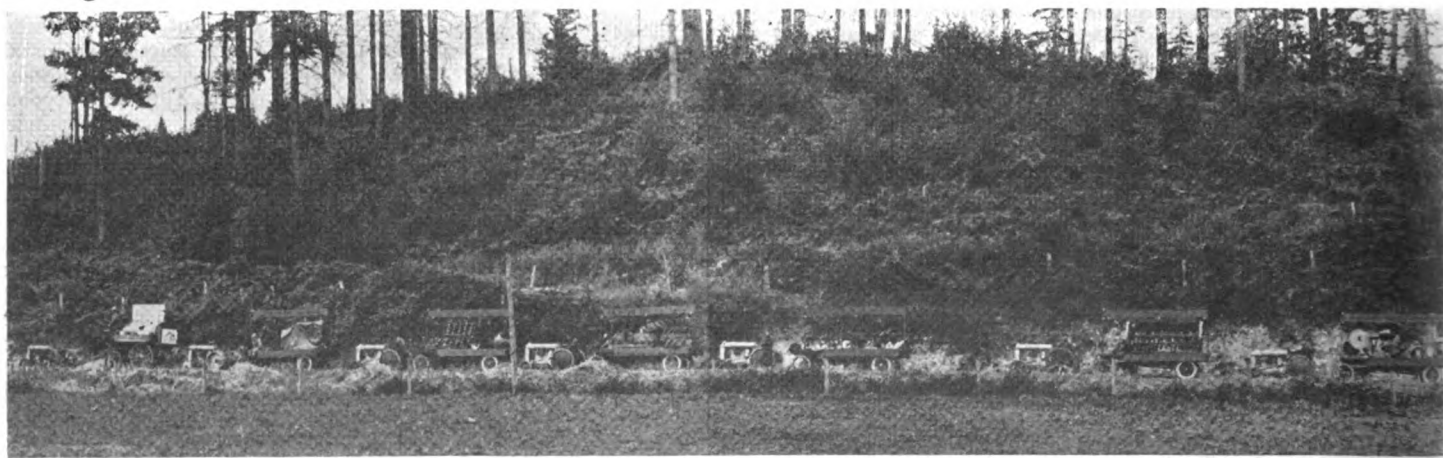
Proposed Separate Tax

It had been proposed to place a separate tax on each make of car handled by dealers, but this was also amended and virtually stricken out. Passenger car dealers, motor truck dealers and tire and accessory dealers will, however, pay about 25 per cent more in general taxes. Automobile schools are taxed \$10, and automobile assembling plants \$500 in each county; truck assembling plants, \$300 in each county. Regularly licensed dealers are exempt from the garage tax.

Court Saves Revere

LOGANSPOUT, IND., Aug. 9—Judge Souder has ruled that the factory of the Revere Motor Car Corp. should not be sold by the receiver and that the plant shall continue to be operated under receivership of the Citizens Loan & Trust Co. of Logansport. The receiver will continue to meet orders for cars. Since being placed in the hands of a receiver several months ago an average of one car a week has been completed at the plant.

The Fordson Demonstration Caravan Which Is Showing the



One of the most difficult problems confronting the farmer of Western Washington is the clearing of logged-off lands. A device for this purpose, which is similar to that used with steam donkey engines, has been developed for use with the Fordson tractor. In order to create interest in this device as well as other types of power farming equip-

CALIFORNIA RULES ON USED-CAR PURCHASES

State Motor Vehicle Department Regulates Registry, License Plates, etc.

SACRAMENTO, CAL., Aug. 9.—New rules and regulations governing the purchase and sale of second-hand automobiles by dealers have been announced by the State Motor Vehicle Department, as follows:

"All cars equipped with 1920 license plates also must carry, at the time of demonstration for sale, the dealer's 1921 license plate.

"The department will not issue dealers' yellow certificates for cars registered under individual registration plates in 1920 or 1921. The dealer may demonstrate all second-hand cars which were in his possession on Feb. 1, under dealers' license plates, provided he has the correct certificate of registration attached thereto. All cars purchased by a dealer after Feb. 1 should be covered by 1921 registration plates if operated by the previous owner after Feb. 1. If not operated after Feb. 1, the previous owner should furnish the affidavit of non-operation, and this affidavit must be attached to the 1920 registration certificate. When the car is sold, the certificate shall be signed by the purchaser and sent to the department with a fee for 1921 registration, the amount depending upon the quarter of the year in which the car is sold. The dealer must report the sale to the department on the dealer's report-of-sale blank.

New Rules for Dealers

"The department must know the date on which a dealer purchases a second-hand car covered by a 1920 or 1921 registration certificate. Do not fail to give us this information when sending in the certificate with the purchaser's fee for registration.

"If a dealer purchased a car after Feb. 1, and failed to secure an affidavit

ALL AVAILABLE SPACE GONE FOR OTTAWA'S SHOW SEPT. 9-17

OTTAWA, ONT., Aug. 9.—Every available bit of space has been let in the Transportation Building that will house the display of cars at the Ottawa Central Canada Exhibition Sept. 9-17. A few places are available in the annex that is devoted to trucks, accessories, etc., but already several requests for these have been received. When the curtain rises on the exhibition and Baron Byng of Vimy declares the show open, Ottawa motor dealers will get away to the best selling event they have ever experienced.

from the former owner, the full year fee is due, plus a \$1 transfer fee, when sold. If the car was operated by the previous owner for more than 30 days, a 25 per cent penalty will be added.

"In selling a car which has been consigned to a dealer for sale, the dealer's name need not appear on the certificate, but he must report the sale of the car to the department on a dealer's report-of-sale blank, writing on the margin of the report that he acted as agent only. The dealer should never, at any time, send to the department either a blue or yellow copy of a report of sale. The white copy only should be sent; the yellow copy is to be kept in the book for future references, and when the book is completed it must be returned to the department."

Garages Cut Charges

KALAMAZOO, MICH., Aug. 8.—Two leading garages in this city announce a reduction of per hour work to customers from \$1.25 to \$1. This has been effected without any reduction in wages, simply by a readjustment in working conditions. A similar reduction is also announced at Battle Creek.

UNIT PARTS ORDERS INDICATE CAR SALES

Many Manufacturers Planning Spring Schedule—Spurt Expected After January 1

DETROIT, Aug. 9.—General improvement in passenger car business in August, September and October, with gains for each month over the month before, is indicated in orders now being placed with leading unit parts makers. November and December are expected to show a falling off, but a general sales spurt all along the line is declared certain to follow the turn of the year and the opening of the show season.

Many of the car manufacturers are already planning a manufacturing schedule in anticipation of spring business which they will get under way in December. Some of the others are known to be outlining a schedule which will start off promptly the first of the year, while the remainder will wait the opening of the actual selling season and trust to ability to speed up quickly, to meet demands.

Depends on Finances

All of these arrangements depend to a large extent upon the financial position of the different companies. The stronger companies will start to stock up first and will build a little higher than the others. There has been much conjecture on just what the attitude of the companies would be toward preparing for spring sales, and apparently the first impression that little stocking would be done is proving wrong. The spring of 1922 will find, however, many thousands less cars than 1921.

Passenger car production in all Detroit factories to-day is being held strictly to sales levels, and there will be little accumulation of cars before December. This is far different from the situation last year which resulted in the storing of so many cars over the fall and winter months.

Farmers of Western Washington the "How" of Power Farming



ment, the Ford branch in Seattle are having this caravan tour the western part of the State. The caravan consists of Fordson tractors drawing trailers on which are mounted all kinds of farm machinery, a cutaway Fordson, Fordson locomotive and a Delco light plant which supplies illumination for the camp at night.

FORD TRACTOR PLAN AIDS SALESMANSHIP

**Puts Dealers on Alert, Says
Factory—Opportunities
Are Plentiful**

DETROIT, AUG. 8—Henry Ford's plan of pushing tractor sales through all dealers of the Ford Motor Co., regardless of whether located in the heart of an industrial district or in the center of a farming community, finds defense at the factory in the statement that the plan helps to develop salesmanship among the company's dealers.

No effort is required to sell Ford cars is the factory view. Selling of tractors, however, particularly in some eastern cities where tractors have scarcely ever been seen in operation is considered another question. Of course, it will require effort to sell them, admits the factory, but dealers and salesmen are supposed to exert themselves.

There is plenty of opportunity for tractor sales outside of actual farming districts, holds the company. All sorts of pamphlets and sales opportunities are constantly being mailed to dealers setting forth work in which tractors can be used advantageously aside from farm work. In the opinion of the company tractors could be far more serviceable in many forms of general contracting and road construction work than horses.

It was further declared that while company's experts were constantly at work developing new fields in which tractors might be used, it was part of the dealer's work to discover a few outlets for himself and put sales over. Practically every inch of the United States has been carefully analyzed, the company declares, and no tractors are being shipped where there are no sales possibilities. This holds just as good for New York City as for Jones Crossing.

Furthermore, it was declared that the Fordson tractor, being operated by kerosene at about 9 cents a gallon in practically every section of the country, did not suffer the handicap asserted confronting gasoline consuming machines, of being uneconomical in the face of present prices for horse feed.

There is no question in the company's mind but that the tractor policy is sound. It is firmly convinced that every dealer who has received tractors will sell them as soon as he gets to work. And getting to work on tractors will but keep him in good merchandising condition to keep his sales of cars up to the high point that they are now reaching in all parts of the country.

Rocky Mountain Firms Merge

DENVER, Aug. 6—The Sharman Automobile Co., wholesale distributor of the Oakland Six in the Rocky Mountain States, and the Cordingly-Simmons Automobile Co., Denver dealers, have been merged. Mr. Cordingly and Mr. Simmons will retire from the business and Oaklands will be sold at retail in Denver by the Sharman company.

NEW SKYSCRAPER GOING UP ALONG QUAKERTOWN'S MOTOR ROW

PHILADELPHIA, Aug. 9.—Another skyscraper is being erected on Motor Row, near the newly finished Willys Building. This newest structure will house the Hurley Motor Co., Reo distributor. It will not be completed until late winter, or early spring.

"July is the best sales month we have had in more than a year," said Thomas, of the house of Grieb & Thomas, Inc. This concern handles the Briscoe and Kissel cars.

Garageman Negligent When Car Froze, Court Finds

(Continued from page 33)

owner as to the place where the property is kept. Its acceptance by the garage man imposes on him the duty of exercising due care for its safety and protection." Huddy on Automobiles (5th Ed.) Sec. 202; Berry, Automobiles (2d Ed.) Sec. 742; Stevens v. Stewart-Warner Speedometer Corp., 223 Mass. 44, 111 N. E. 771.

Sullivan was a bailee for hire, and as such he was under legal obligations to exercise, with respect to plaintiff's automobile, such ordinary care as a man of ordinary prudence and discretion ought to exercise, and would be expected to exercise under all circumstances if the property were his own.

"The garage keeper is not an insurer of the automobiles left in his charge to be cared for, but he is bound to use reasonable or ordinary diligence in their care and keeping to the end that they be not damaged or destroyed or lost by reason of theft or otherwise." Berry, Automobiles (2d Ed.), Sec. 742, and cases cited under note 9.

From a case in point, we carve the following:

"Proof that a motor car, when delivered to a garage keeper, was in good order, but when called for a few days later it was damaged, the water jacket having frozen and burst, makes out a prima facie case against the bailee, the garage keeper. It then became the duty of the garage keeper to rebut the prima facie case, by showing that he used due care as bailee. * * * Smith v. Economical Garage, 176 N. Y. S. 479.

We are unable to find in the record any substantial evidence, either direct or inferential, which justifies the finding that the plaintiff's car was injured by "an unexpected freeze that came on suddenly after the plaintiff left his automobile with the defendant." Nor can the court take judicial notice that the water in the radiator of the car became congealed by reason of a sudden change in climatic conditions. It has been held that variations of climate in particular places at particular times cannot be judicially known.

The judgment in this case is reversed and the cause remanded for further proceedings not inconsistent with this opinion. *Simms vs. Sullivan*, 198 Pacific (Oregon) 240.

Pueblo Fund Now \$975

ST. LOUIS, Aug. 8.—The fund to aid Pueblo automotive men conducted by the National Automobile Dealers Association is now \$975.

FORDNEY IN FAVOR OF GRAHAM MEASURE

**Resolution Calling for Reim-
ports Levy to Be Pushed—
Dealers See Protection**

WASHINGTON, AUG. 9—Chairman Fordney of the House Ways and Means Committee has indicated that special attention will be given the Graham resolution calling for a levy of 300% on reimported war supplies. It is expected the resolution will be reported out either this week or next, in order that it may be considered in the House before debate begins on internal tax revision. Automobile dealers believe that the Graham resolution will afford better protection against underselling by foreign speculators than the tariff bill now pending.

The Graham resolution is more drastic than the provisions carried in the House tariff bill and it levies specific duties which are prohibitory. With the resolution through the House, its passage could be expedited in the Senate and the resolution would become effective several weeks before the tariff bill is enacted, thus putting an immediate check on reimportation activities.

It is known that majority members of the Ways and Means Committee are in favor of this proposition as interim legislation. They are receiving numerous complaints to the effect that European and American speculators are selling American war supplies at prices which defy American competition.

TEMPLAR INTRODUCES NOVEL DEMONSTRATION

CLEVELAND, AUG. 8—Three new Templar roadsters have started on a 5000 mile trip which will include a call on every Templar dealer east of the Mississippi. More than 100 cities and towns will be visited. The cars have up to now passed through Buffalo, Rochester, Syracuse, Albany, Boston, Portland, Providence, Bridgeport, New York and vicinity, Atlantic City, Philadelphia, Scranton and Harrisburg. Officials of the Templar report a marked increase in June and July deliveries. They say August will be even a better month.

ANDERSON MAN PREDICTS BETTER FALL BUSINESS

DETROIT, Aug. 9—Business in high class custom built cars promise well for fall and winter months, declares General Sales Manager C. B. Shanks of the Anderson Motor Co., Rock Hill, S. C., who is in Detroit this week.

August business with the Anderson company will run ahead of sales in August 1920, he said, after falling slightly under the 1920 totals in July. New territories are being opened by the company in many sections of the country, through the appointment of distributors.

WISCONSIN FIRST TO OPEN FIGHT ON TAX

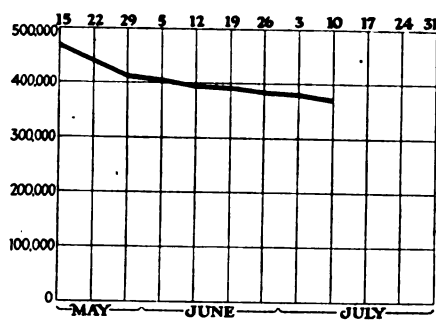
Associations Unite in Protest— Dealers Stirred and Will Start Campaign

MILWAUKEE, WIS., Aug. 8.—The storm of opposition and protest that has arisen in the automotive industries and among users against the proposed national tax on passenger and commercial cars has taken organized form in Wisconsin under the leadership of the associations of manufacturers, dealers and owners. Jesse A. Smith, Hudson and Essex distributor, who is president of the National Automobile Dealers Association, said:

"While both the National Automobile Dealers Association and the National Automobile Chamber of Commerce have representatives at Washington fighting to defeat this proposition, we need the united protest of owners added to ours if this tax is to be defeated. While Congress is reported to be lukewarm on the proposal of Secretary of the Treasury Mellon, which is reported to have the support of the President, we are apprehensive, for it is a fond idea of legislators to regard the motor car as a 'luxury,' that owners are wealthy persons, and thus may be taxed at will. Owners now pay a 5 per cent tax on new cars, are required to pay state and sometimes local license fees, personal property taxes, and state and local road taxes. Seventy-five per cent of the passenger cars in this country are used for business, and trucks certainly are business cars. We believe the motor vehicle already is overtaxed, and no additional burden should be imposed."

Bart J. Ruddle, executive secretary and manager of the Milwaukee Automotive Dealers Association, said:

"We are maintaining good roads in Wisconsin and paying heavily for them. Why should we also be called on to help some undeveloped state build its roads? We have repeatedly made our case known to members of Congress and we will not halt our efforts in opposition to the proposed federal tax until it is definitely killed. Vigorous protests also have been made from other parts of the country. There are 9,260,000 owners in the United States and I doubt if Congress will dare to antagonize them further. In addition to all other taxes, motor trucks are compelled to pay an 8 per cent transportation tax and it is not right and proper that the great national transportation system being built up with commercial vehicles should be penalized more than it already is."



IDLE FREIGHT CAR RECORD

The black line represents the record of idle freight cars throughout the United States. It is a business indicator of interest to all automotive men, and especially to truck dealers. When the railroads are busy carrying merchandise it follows that manufacturers and merchants are busy fulfilling the needs of customers. Between May 15 and July 10 the average net car surplusage has shrunk from 469,770 to 371,841, a decrease of 97,929. During the week of June 26-July 3 the surplusage was reduced 3,811, and between July 3 and July 10 the surplusage shrunk 9,998 cars more.

FORD SALES GAINING IN SOUTH AND MID-WEST

DETROIT, Aug. 9—While Ford business in all parts of the country is continuing at record heights, the company is particularly elated with improvements in the south and mid-west, where for a long time things were at a standstill.

In a casual analysis of the changed situation in the south, the company expresses the belief that the elimination of the one-crop plan in favor of diversified crops is responsible for the new order of things. Prosperity will be no longer dependent upon the market price for cotton or sugar or rice, southern dealers assert to officials, but will be a permanent and welcome guest in the land.

Cut Three H. C. S. Models

INDIANAPOLIS, IND., Aug. 8.—The H. C. S. Motor Car Company, of Indianapolis, manufacturers of the well-known car which was designed by Harry C. Stutz, has reduced prices on three of their models which became effective August 1.

Price reductions are as follows: Roadster, \$2,925 to \$2,725; four-passenger touring car, \$2,975 to 2,775; coupe, \$3,650 to \$3,450, a reduction of \$200 on each model.

The four-passenger sedan which has just been announced to the public is listed at \$3,650.

Transport Trucks Cut

MOUNT PLEASANT, MICH., Aug. 9—Price reductions ranging from 11 to 25 per cent on three of the four models comprising its line, are announced by the Transport Truck Co. The 1-ton model is reduced from \$1,850 to \$1,395, 1½-ton from \$2,250 to \$1,995, 3½-ton from \$4,195 to \$3,885. The price of \$2,785 on the 2½-ton truck remains unchanged.

COLUMBIA MOTORS CUTS FIVE MODELS

Specifications Remain Same on Regular and Challenger Lines —Appearance Changes

DETROIT, Aug. 10—The Columbia Motors Co. will reduce the prices of both the regular and Challenger lines, effective Aug. 15. Following are the old and new prices:

	New Price	Old Price
De Luxe touring, 5 pass.	\$1475	\$1795
Sport Model, 4 pass.	1475	....
Roadster, 2 pass.	1475	1795
Coupe, 4 pass.	2295	2495
Sedan, 5 pass.	2350	2595
Challenger Touring, 5 pass. . .	1195	1495
Challenger Coupe, 4 pass. . .	1995	....
Challenger Sedan, 5 pass. . .	1995	....

The general specifications and standard manufactured units remain unchanged in both the models, but refinements and changes in general appearance have been made in the bodies and the equipment has been changed slightly.

Wills Cuts Prices

MARYSVILLE, MICH., Aug. 10—Having attained a sufficient volume of production, C. Harold Wills and associates have made a readjustment in retail prices effective Aug. 5 as follows:

	New Price	Old Price
Roadster	\$2875	\$3275
Touring Car	2875	3275
Coupe	3750	....
Sedan	4100	....

No prices had been previously set on the enclosed models as none have been in production. Work is well under way on these now, however, and deliveries are expected by Sept. 1.

Westcott Prices Drop

SPRINGFIELD, OHIO, Aug. 8—The Westcott Motor Car Co. announces reductions in its various models effective Sept. 2. In the "lighter six" line the roadster and touring car will be reduced from \$2,290 to \$1,890; the sport model from \$2,390 to \$1,990; the coupé and sedan from \$3,390 to \$2,890. In the "larger six" line, the seven passenger touring car will be reduced from \$2,990 to \$2,090; the sedan from \$4,590 to \$3,490 and the limousine sedan from \$4,690 to \$3,690.

Reduce Kalamazoo Trucks

KALAMAZOO, MICH., Aug. 9—Reductions ranging from \$300 to \$425 on all models of its trucks are announced by the Kalamazoo Motors Corp. Two new models also will be added to its line. The model G-1 1½-ton is reduced from \$2,800 to \$2,495, model G-2 1½-ton from \$3,100 to \$2,800, the 2½-ton from \$3,700 to \$3,275, the 3½-ton from \$4,300 to \$4,000, the 5-ton from \$4,800 to \$4,500. A new 3-ton model will sell for \$3,700 and a special road builders' 5-ton new model for \$4,800.

HEINS HERE TO FIGHT BOSCH AUCTION BY U. S.

Ex-President Comes from Germany to Press Suit Declaring Sale Void

NEW YORK, Aug. 9—Otto Heins, former president of the Bosch Magneto Co., has arrived in this country from Germany to press his suit to have the sale of that property declared void. It recently was charged that A. Mitchell Palmer, as alien property custodian, showed undue favoritism to the present owners in the sale of the assets at auction.

Heins is represented by his attorney, Harvey P. Andrews of this city, who also is acting for several other German interests which are seeking the return of the property they formerly owned. Associated with him in this work are Clarence D. Miller, secretary of the Republican National Committee, and John Thomas Taylor, head of the Washington office of the American Legion, according to a statement by Andrews. Andrews has had much correspondence with the Republican senators and representatives who are members of the Foreign Relations committees of the two houses of Congress. Andrews himself has been prominent in Republican politics in this city.

Heins, who is a German citizen but is said never to have been declared an enemy alien, returned to Germany early in 1920, having been reduced from the status of a millionaire almost to that of a pauper. He has completed the reorganization of his business interests in Germany and has visited England, France and other countries. He now has come to the United States to make a strong effort to regain control of the company now known as the American Bosch Magneto Corp.

Regardless of the success of his suit, Heins intends to go into business in competition with the American Bosch Magneto Co., according to Andrews, "and expects to surpass them all in the manufacture of magnetos." His attorney added that he expects to file patents very soon and will manufacture a new spark plug and lighting system.

The action started against Palmer on behalf of Heins over the sale of the Bosch Magneto Co. alleges fraud and demands that the sale be declared null and void. It is charged that Palmer sold the property to Martin E. Kern, a personal friend, for \$4,500,000, although it was worth \$12,000,000.

Haynes Adds New Model

KOKOMO, IND., Aug. 8—The Haynes Automobile Co. has brought out a new model which will be known as the Haynes 75. The new car has a six-cylinder engine with cylinder dimensions of $3\frac{1}{2} \times 5\frac{3}{16}$ in., 132-in. wheelbase and $34 \times 4\frac{1}{2}$ in. tires. Prices are as follows: Roadster, \$2,685; 5-passenger touring, \$2,485; 7-passenger touring, \$2,485; brougham, \$3,185; sedan, \$3,485.

1922 NEW YORK MOTOR SHOW AT GRAND CENTRAL PALACE JANUARY 7-14

NEW YORK, Aug. 9—Definite announcement is made by the National Automobile Chamber of Commerce that the annual New York show will be held at the Grand Central Palace Jan. 7-14. Earlier in the year it was supposed the Palace would not be available and Madison Square Garden was the next best location. Plans for converting the Palace into offices have been delayed, however, and the N. A. C. C. will be able to use it for the 1922 exposition which will be one of the most important ever held.

FACTORY OUTPUT LOW; MAY CANCEL ORDERS

PHILADELPHIA, Aug. 8—A canvass of eight suburban boroughs and towns shows that while new automobiles are, in most instances, selling well—much better than a month ago, in fact—there is now danger of some of the sales being canceled because of slowness in factory production. In not a few instances customers who have ordered cars and found they could not be delivered for many weeks, if not exceeding two months, have stated their intention, in case of non-delivery within a specified time, to cancel the order and obtain a car of another make, whose factory is producing.

While the sale of accessories, with the exception of such articles as greases, windshield cleaner, and the like, is absolutely flat in most of the dealers' places, as well as garages, tires are beginning to show more movement, except in far-outlying points. Trucks are slow and nothing much is being done in the line of trailers, although some tractors are being sold, particularly for industrial purposes, even in farming communities.

SEIBERLING 'COMES BACK' TO THE RUBBER INDUSTRY

NEW CASTLE, PA., Aug. 8—Frank A. Seiberling, former president of the Goodyear Tire & Rubber Co., has "come back" to the rubber industry, as his friends predicted he would, after relinquishing control of the huge corporation he built up from the humblest of beginnings.

Under a court decree he will take possession of the New Castle Rubber Co. which he purchased for \$103,000 at a bankruptcy sale some time ago. This price was considered very low as the factory is well equipped and cost several times that amount.

While awaiting confirmation of the sale by the court, Seiberling told New Castle bankers that he expected to take personal charge and begin operations as soon as possible.

A. A. A. ASKS 10,000,000 OWNERS TO FIGHT TAX

Seek Nationwide Protest Against \$10 Impost Proposed by Secretary Mellon

WASHINGTON, Aug. 9—Appeal has been made by the American Automobile Association to 10,000,000 owners of motor vehicles to oppose the proposal of Secretary of Treasury Mellon for a \$10 flat tax on automobiles irrespective of power or size. Statistics have been sent broadcast showing that automobilists are already carrying more than their share of tax burden and that further advances in rates would be obviously discriminatory and iniquitous.

It is said that Chairman Fordney of the House Committee on Ways and Means is opposed to the Mellon proposal for a tax on automobiles because he believes cars of small power should not pay the same rate as larger cars and heavy trucks. The recommendations of the Treasury Department have precipitated a bitter fight in Congress, which is not confined to party lines. It is expected that representatives of agricultural districts where there are large numbers of motor vehicles in use will fight the enactment of a motor tax.

Because it is primarily a tax which hits the user of automobiles, the American Automobile Association is handling the movement against the Mellon measure, but has the support of the National Automobile Chamber of Commerce and other large business organizations. Every automobile club in the country has been asked to bring pressure to bear on congressional leaders, and with 10,000,000 automobile owners protesting, Congress is expected to give due thought to the possible economic and political effects of an automobile tax. Attention of House Committee on Ways and Means has been called to the fact that car owners are paying a multitude of taxes on their cars, including registration fee, driver's license fee, personal property tax, municipal franchise tax, motor fuel tax and other local assessments.

The excise taxes on automobiles will probably be maintained.

BELL TRUCK BUSINESS IN HANDS OF NEW FIRM

OTTUMWA, IOWA, Aug. 8—The Bell Truck Sales Corporation has been organized at Ottumwa, Iowa, to take over the sale of the output of the Iowa Motor Truck Company, manufacturers of the Bell truck.

The new company is headed by Paul T. Browning, who is well known in the automotive industry, having been connected with General Motors for several years in the Buick division. He has been more recently with Sheridan Motors. Jack Miller, who has been with the Iowa Motor Truck Company as sales and advertising manager, is secretary and advertising manager.

WILLARD MEN GATHER; GREET NEW OFFICIAL

Service Station Proprietors Meet on Coast—Rolph De- plores "False Economy"

SAN FRANCISCO, Aug. 9—Willard service station proprietors and managers and members of the San Francisco branch of the Willard Storage Battery factory at Cleveland gathered here for a convention July 25, and to meet S. W. Rolph, assistant to the general manager of the big battery-making concern. The convention was called to order at the Palace Hotel in the morning by S. G. Wolf, San Francisco branch manager, who introduced Rolph to one of the largest gatherings of battery experts that ever met in the West. In addition to Rolph, the speakers from the factory included H. S. Gardner, salesman, and S. E. Baldwin.

In his address, Rolph deplored what he characterized as "false economy" on the part of the business men, and he urged the Willard men to discriminate carefully between wise and unwise use of the financial pruning knife. He said he was moved to speak only by the fact that the experience of his own company might be valuable to others and that there were times, such as the present, which call for the highest degree of co-operation in the business world.

Forced to Economize

"Most concerns, whether they be manufacturing, jobbing or retailing," he said, "have been forced to certain economies during the past year, but in my opinion, and in that of a number of students of business with whom I have talked, there has been too much blanket cutting of expenses. The result is that sales departments have suffered severely in many cases at a time when they really needed, not less help, but more. How can any company expect its salesmen and its distributors to show more fighting spirit if it fails to give them the kind of support necessary to land business these days.

"Business needs advertising for one thing to-day as it has not needed it in a long time. We in the Willard company believe this so firmly that our ad-

MOTOR RACING SPEEDWAY FOR SAN FRANCISCO REALITY SOON

SAN FRANCISCO, Aug. 9—The erection of a motor speedway in San Francisco in the near future is announced by the San Francisco Motor Car Dealers Association, which has named William L. Hughson chairman of its racing committee. Hughson is now on an inspection tour of the Cotati (Cal.) and Tacoma racing bowls, gathering data for embodiment in the bowl to be constructed here. Mr. Hughson also recently visited several speedways in the East. Location for the new bowl here has not been selected, but it probably will be in one of the suburbs. It is generally understood that the financing of the project is virtually arranged.

vertising expenditure this year is considerably greater than last year and larger than any appropriation in our history. This advertising is supporting our men on the firing line; by which I mean our service station proprietors and managers and our battery dealers. We are using leading papers in 80 cities, from coast to coast, all of them with large space units. Not only that, but we are urging our service stations and dealers to extend their own advertising efforts in the newspapers and counselling them as emphatically as we can to be consistent and not spasmodic advertisers. The need of more and better newspaper advertising is one of the most important subjects on our convention program."

Dodge Agent Plans New Home

SAN FRANCISCO, Aug. 8—H. O. Harrison Co., Dodge distributor in this city, has taken over all the space in the building at Van Ness Avenue and Post Street, a portion of which it had previously occupied. It will be one of the largest motor sales and service buildings on the Pacific Coast. The Harrison company has now handled Dodge for about seven years and has been in business in San Francisco fifteen years.

ACCESSORY MEN CLEAN UP ON PACIFIC COAST

Tourists Keep Tire and Equip- ment Dealers Busy—Cars Going Well

SACRAMENTO, CAL., Aug. 9—Dealers in motor cars are not the only ones who are partaking the joys of the restoration of the motor car industry in California, for the accessory dealers are reaping a harvest this summer. It is the California vacationist and the visiting tourist, of course, who are doing the work for them.

Tire dealers, particularly, have rejoiced in the long, hot summer which has made the pavements blow out casings that ordinarily would have served another thousand miles. Then mountain travel, too, is not too gentle with the rubber shoes of the motor car, and all in all, the tire dealers have had a little bit the best of it.

Camping equipment has been in heavy demand, and supply stores have been hard put to it to keep abreast of the call for this class of goods.

Automobile dealers have been enjoying the best season in three years, and really the best they have known since the business developed, for it is built upon stable conditions. Not a few of the contract sales of war times have come back upon the hands of the dealers when the war work ended. The dealer has not lost, for the payments made in most cases more than took care of the depreciation of the car. Now, however, with conditions settled, the price reduction flurry apparently at an end, business is moving ahead rapidly.

One of the most encouraging and convincing proofs of this is the fact that automobile salesmen, driven from their business during the recent financial depression to other vocations, are returning rapidly to their old firms.

N. A. D. A. Lectures Close

ST. LOUIS, Aug. 8—The first step in the N. A. D. A. to better acquaint shop and service men by lectures with important units used in many of the leading makes of motor vehicles was brought to a close after a month's trial.

Champion Holds Mid-Summer Convention



Co-operation with other manufacturers as well as with jobbers, jobbers' salesmen and dealers in strengthening resales was the big idea carried home by those who attended the Mid-Summer Convention of the Champion Spark Plug Co. The picture was taken at the factory in Windsor, Ont.

ASSOCIATION ACTIVITIES

Alabama Dealers Meet

CODEN, ALA., Aug. 8.—A closer organization was perfected and worthwhile efforts put forth with genuine accomplishments effected by the automobile dealers of Alabama at their two-day semi-annual convention, which closed with a fishing trip here.

National and State legislation affecting the business of the members was gone into thoroughly by the Alabama Automobile Dealers Association, and all members pledged themselves to help put over those laws and measures which are for the good of the State.

There was talk of selecting a permanent meeting place for the association, but this matter was postponed for consideration at the annual convention, which will be held in Montgomery in January. Many members like the idea of meeting on or near the Gulf Coast, and it was suggested by some members that the annual meetings be held in Montgomery and the semi-annual ones at Coden or another coast town.

Picnic for Youngstown

YOUNGSTOWN, OHIO, Aug. 8.—Youngstown automobile dealers will hold a picnic Aug. 17. Brier Hill Steel Co. Park of several thousand acres has been secured for the occasion. All employees and families will be the guests of the automobile dealers at an old-fashioned picnic.

Charlotte Elects Harris

CHARLOTTE, N. C., Aug. 8.—J. P. Harris of the Burwell-Walker Co. has been elected president of the Charlotte Automotive Association to succeed Ed. M. Wallace of the Southern Oakland Co. Wallace resigned the presidency because he leaves Charlotte for Atlanta to be southern manager of sales for Scripps-Booth. Lane Etheredge of the Etheredge Motor Co. was elected vice-president to succeed Harris, and Charles Collins of the McLaren Rubber Co. was elected a director to succeed Etheredge.

Milwaukee Show August 29

MILWAUKEE, Aug. 8.—The Milwaukee Automotive Dealers' Association will hold their annual fall automobile show at the Wisconsin State Fair, August 29 to September 3 inclusive.

WEED CHAIN PATENT TO RUN OUT, FIRM SILENT

NEW YORK, Aug. 8.—Representatives of the American Chain Co. declined to-day to state what policy would be pursued in reference to the Weed chain when the basic patent covering it, No. 768495, runs out Aug. 23 next. The only comment made was that "we have not been asleep in reference to the Weed patent." The inference was that the

company has prepared to put an improved chain on the market. It was said an announcement covering the subject would be made about Sept. 1.

When the patent expires there will be nothing to prevent the manufacture of the Weed chain by anyone who cares to produce it. Infringements will be prosecuted up to the end of this month, however. An infringement suit was won by the American Chain Co. last March.

The Parsons patent, No. 723299, under which tire chains were manufactured by the American Chain Co., expired on March 24, 1920.

DYER TRANSPORTATION MEASURE FAILS TO PASS

WASHINGTON, Aug. 9.—Efforts to pass Senate bill 1060 which is an amendment to "an act to punish the transportation of stolen motor vehicles in interstate or foreign commerce," failed in the House this week and the measure was restored to its place on the regular House calendar. It is known as the Dyer bill and provides a penalty of five years or a fine of \$5,000.

INCORPORATE AGENCY OF SOUTH BEND FIRMS

INDIANAPOLIS, Aug. 8.—Incorporation papers have been filed here by the Franklin-Marmon Co. of South Bend, Ind., an organization incorporated for the purpose of dealing in automobiles and accessories. The company has a capital stock of \$600,000, half of which is preferred stock. Organizers of the company are, W. L. Mack, J. J. Woolverton, E. F. Johnston, R. W. Reynolds and G. A. Farabaugh.

The Air Cushion Inter-Tire Sales Co. of Indiana has been organized at Fort Wayne, Ind., with a capital stock of \$50,000. The company will deal in automobiles and accessories and the directors are F. A. Beimer, E. J. Mommer, L. P. Laibe, James Shearer and J. S. Boone.

Tire Men Meet Sept. 22

NEW YORK, Aug. 5.—The first of the quarterly meetings of the tire manufacturers' division of the Rubber Association of America will be held Sept. 22. The executive committee will hold its regular monthly meeting the previous day and such recommendations as may be formulated then will be considered at the division meeting. Two important questions under consideration are mileage adjustment and protection against price decline.

Seiberling at Republic

YOUNGSTOWN, Aug. 9.—F. A. Seiberling, former president of the Goodyear Tire & Rubber Co., has inspected the properties of the Republic Rubber Corp. in Youngstown and Canton, now operating under a receiver. Seiberling may purchase the Republic business and plants and merge them with the Newcastle Tire & Rubber Co., which he has acquired.

PASSENGER CAR SALES IMPROVE IN NEW YORK

August Business Better Than Expected—Buying of Used Cars Close

NEW YORK, Aug. 8.—Passenger car sales in the Metropolitan district have been a little better so far this month than was expected by dealers who had carefully reviewed their books for August in pre-war years. Turnover, of course, is of smaller volume than in July but the decline has not attained the importance of a slump by any means. Buick, Studebaker and Dodge are still selling far ahead of supply as they were in June and July and several other cars are still running strongly.

Every week dealers have been added to the list of those who have all but stopped trading. Buying in the used car market is so close that quite a number of dealers have been taught a sharp lesson on the subject of over-allowance. A few are still taking in owners' cars at figures plainly above what they can get for them but the practice is far less widespread than it was two or three months ago. Several dealers are frankly telling new car prospects to go out and sell their used cars themselves unless they are willing to take a reasonably low price for them.

The question of operating costs is troubling several of the largest distributors, who are facing renewals of sales-room leases at rental figures anywhere from 50 to 100 per cent above what they were when they signed their present contracts five years ago. It is probable that there will be several removals this fall and one or two dealers may go around the corner in one of the side streets off Broadway.

MARTIN PARRY TO OPEN SEVEN BRANCHES SOON

NEW YORK, Aug. 8.—Seven new assembling and distributing branches will be opened in the near future by the Martin Parry Corp. They will be located in Philadelphia, Cleveland, Pittsburgh, Detroit, St. Louis, Kansas City and Newark. The same number of branches now is in operation. The purpose of opening the new stations is to carry a complete line of commercial bodies, relieving dealers from the necessity of tying up money in body stocks and to satisfy growing demands for sectional bodies. The plant of the company at York, Pa., is running at capacity and the Indianapolis plant on a 50 per cent basis.

Columbia Dealers Meet

DETROIT, Aug. 6.—For the first time since the Columbia Motors Co. acquired its club house on the shores of Lake St. Clair, ten miles outside of Detroit, a convention of its dealers was held there on Wednesday, July 27. Distributors and dealers from all sections of the country were in attendance.

CHANGES IN THE TRADE

O. E. Vestal has joined the Packard Motor Co., sales force in Pittsburgh.

Hartford Scripps-Booth Co., Hartford, Conn., has filed a certificate of dissolution.

M. M. Whorley has been appointed sales manager of the Columbus Tire and Rubber Co., Columbus, O.

G. L. Newton & Co., Waterville, Wash., have sold out to J. L. Eddins & Sons of Cheney, Wash. No future plans have been announced.

J. C. McCloskey, Camden, N. J., has been appointed distributor for Schwartz trucks in New Jersey and Pennsylvania. He has new sales and showrooms.

Wildhock Co., Indianapolis, has taken over the distribution of Reo passenger cars and Reo speed wagons. The Fisher Automobile Co. were the distributors.

C. E. Gripe, who has been manager of the credit department of the Haynes Automobile Co. for four years has resigned. A. E. Small is now in charge of the department.

Kleiber Motor Truck Co., San Francisco has opened a new factory branch in Seattle, with F. G. Batenburg, for three years Kleiber dealer here, as manager of the branch.

W. J. Drumpelmann, recently resigned as assistant sales manager of Hudson-Essex, has been elected vice-president and director of sales of Saxon Motor Car Corp., succeeding C. H. Page resigned.

Chevrolet Motor Co. factory branch, Seattle, has been closed and the retail sales have been centered with the Fred S. Haines Company. Haines is one of the pioneers of the automobile business on the coast.

William Cornfoot and associates have transferred their holdings in the Garford Oregon Motor Sales Co. to E. D. Van Dersal, president and general manager of the Karavan Motor Truck Co., a Portland organization manufacturing Karavan trucks.

Dodge Brothers contract for the Western Indiana territory has been assigned by Irby Brothers, a new sales organization formed at Terre Haute, Ind., for the purpose of taking over the contract. S. P. Irby and his brother, J. R. Irby, are the organizers of the company.

Lowell Harris, formerly with the Reo Motor Car Co., Lansing, Mich., and the Capital Auto Co., has taken a position with the Wolverine Automobile Sales Co., Studebaker distributors. He, with H. E. Neller, is one of the principal stockholders in the concern, which recently increased its capital to \$50,000.

T. & S. Motor Sales Co. of this city, has been appointed distributors for the Haynes car in New London and Windham counties. Directors are Charles M. Tredennick and Elliot B. Stretch, until recently connected with the Connecticut Telephone and Electric Co. of Meriden, Conn. and S. Victor Prince, local lawyer and judge of New London.

D. W. Welgel has assumed the management of the Lehigh Tire & Rubber Co., formerly the New Castle Rubber Co., New Castle, Pa., recently purchased at receivers sale by F. A. Selberling. It is understood Selberling will come here personally in a few days to supervise the resumption of operation. It is proposed to make about 500 tubes a day.

Joseph C. de Varona has been appointed special representative for the Maxwell Motor

Corp., de Varona has been with the General Motors Co. for the past five years. He had charge of the Modern Housing Corp. at Flint, Mich., during the time that this General Motors subsidiary erected one thousand houses for its employees. More recently, he was sales manager of the Buick branch at El Paso, Texas.

R. S. Abbott, for the past ten years manager of the Atlanta district for the Ford Motor Co., and in charge of the large assembling plant at Atlanta, has been promoted to the management of the district with headquarters at Houston, Tex. This district includes a large part of Texas and all of Mexico. Abbott is succeeded by W. W. Mitchell, for the past two years assistant manager of the assembling plant at Oklahoma City.

NORTH DAKOTA GETTING READY FOR SPRING SALES

NEW YORK, AUG. 8.—Automotive distributors of North Dakota are commencing to make estimates of the business possibilities for next spring, now that crop conditions are fairly well understood. As North Dakota did not profit during the war by large crops and war prices business in the state did not get far away from the crop. They are better this year. In general motor business throughout North Dakota during the fall and next spring the dealers are awaiting actual figures as to the crop.

Editors See New Durant

NEW YORK, Aug. 8.—At a luncheon served at the Long Island City assembling plant of the Durant Motors Corp. about one hundred automobile editors from New York, Brooklyn, Newark and other nearby cities inspected the new Durant car previous to its public presentation on Broadway at the showrooms of the Poertner Motor Car Co. W. C. Durant, the president of the company, made a short address in which he told briefly his own connection with the automobile business, and engineering and other officials were on hand to thoroughly explain the features and fine points of the new job.

Palmerton to Washington

NEW YORK, Aug. 8.—As a part of its plan to co-operate with the Department of Commerce, the Rubber Association of America has granted a leave of absence to P. L. Palmerton, manager of the foreign trade bureau of the association, so that he can accept the position of chief of the rubber industrial division of the Bureau of Foreign and Domestic Commerce.

New Republic Truck

ALMA, MICH., Aug. 8.—A new $\frac{3}{4}$ -ton truck, model 75, known as the Republic Rapid Transit, has been placed on the market by the Republic Motor Truck Co. It is designed to meet every haulage requirement in rapid transport. The truck will be furnished with quite a variety of different types of body, including a flare-board open type, canopy top type, express type, etc. The price with canopy type body, starter and lights is \$1,395.

WASHINGTON CHAMBER TALKS PROFIT MARGIN

Contracts Also Feature Convention on Coast—Martland Chief Speaker

SPOKANE, Aug. 8.—Discussion of the margin of profit and contracts occupied a liberal share of the attention of the delegates to the annual convention of the Automobile Chamber of Commerce of Washington held here. Several speakers declared that the dealers need a larger margin on their goods and if they hope to get the backing from the banks that they expect the margin must be increased. It also was argued that most of the contracts under which dealers operate at present are unwarrantedly unfavorable to them. The association members want a contract that cannot be taken from them if they live up to its provisions. Crystallization of sentiment on these questions was urged.

One of the chief speakers at the convention was Robert W. Martland, of San Francisco, secretary-treasurer of the California Automotive Trades Association. He spoke on "Organization and Co-operation and Its Benefits."

Asks for Co-operation

Martland declared that while the automotive industry is bound to advance, the progress can be greatly accelerated by proper co-operation and organization.

"Legislatures nowadays figure that the automotive industry is the best bet to get their taxes out of. If you do not maintain and strengthen your organization, you are going to pay in taxes several times the cost of this organization to you.

"There is not a man in this room that has not a problem and not a man in this room but can solve that problem," he said, in counselling co-operation. "Do not be afraid to go to your competitor. He will be pleased to find that you are as broad as he hoped you would be and the chance is that he has solved two years ago the problem that confronted you to-day. You can get no place without organization and a display of confidence in each other. There should be one organization comprising every line of endeavor in the industry, working for the betterment of the industry as a whole, rather than a multiplicity of organizations working to the same end.

"The automotive organization is referred to as the second industry in the United States. It is probably the second in the world. It can be made the first by the aid of organization.

"When a car owner leaves a community we want him to understand that he will get fair treatment wherever he goes, and we must help him to that end whether his destination be the northwest or the state of Maine. Keep him going on his way happy. It will help the industry."

COMING EVENTS

SHOWS

Denver	Aug. 10-12	Midsummer Exhibition of Cars, Trucks and Camping Equipment, Civic Center, under auspices of the Denver Automobile Dealers Association.
Toronto, Can.	Aug. 27	Canadian National Automobile Show.
Milwaukee	Aug. 29-Sept. 3	Annual Fall Automobile Show at Wisconsin State Fair, Milwaukee Automobile Dealers Association.
Indianapolis	Sept. 5-10	Automobile and Accessory Show in conjunction with Indiana State Fair, conducted by Indianapolis Automotive Trade Ass'n, John B. Orman, Mgr.
Ottawa, Ont.	Sept. 9 to 17	Ottawa Motor Show.
Cincinnati	Oct. 1-8	Fall Automobile Show, Cincinnati Automotive Dealers' Ass'n, Music Hall.
Pittsburgh	Oct. 15-22	Fall Show under auspices of Automotive Association.
New York	Nov. 27-Dec. 3	Automobile Salon, Hotel Commodore.
Chicago	January	Automobile Salon, Drake Hotel.
New York	Jan. 7-13	National Automobile Show, under auspices of National Automobile Chamber of Commerce, Madison Square Garden.

Chicago	Jan. 28-Feb. 3, 1922	National Automobile Show, under auspices of National Automobile Chamber of Commerce, Coliseum.
Winnipeg	Feb. 6-11, 1922	Automobile Equipment Show, Western Canada Automotive Association.
Santiago, Cuba	March, 1922	Annual Automobile Show.
Rio de Janeiro, Brazil	Sept., 1922	Automotive Exhibition in connection with Brazilian Centenary.

RACES

Uniontown, Pa.	Labor Day	Autumn Classic.
Los Angeles	Nov. 24	Speedway Events.

CONVENTIONS

Chicago	Oct. 12-14	National Implement & Vehicle Association Convention, Congress Hotel.
Chicago	Nov. 14-19	Annual Meeting and Business Exhibit of Automotive Equipment Association.
New York City	Nov. 22-24	Semi-Annual Convention of Factory Service Managers, N. A. C. C., H. R. Cobligh, Secretary.

The New Car and Truck Description Index

Giving the date and page number on which they appeared

Cars

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Ambassador	Feb. 2, 1921-11
Buick Four	Aug. 10, 1921-28
Collinet (Salon)	Nov. 24, 1920-18
Durant Four	Aug. 10, 1921-30
Duesenberg 8	Nov. 17, 1920-33
Essex (Cabriolet)	Nov. 10, 1920-35
Fergus, 1921	Jan. 12, 1921-23
Forster	Aug. 25, 1920-33
Friend	Jan. 12, 1921-14
Globe Four	Oct. 20, 1920-32
Handley-Knight Four	Nov. 17, 1920-32
Haynes Model 50	Jan. 12, 1921-20
Jackson Four	Jan. 12, 1921-18
Kelsey	Dec. 1, 1920-31
Kenworthy 8	Jan. 12, 1921-13
Kissel Coach Sedan	Jan. 19, 1921-21
Lafayette (Coupe)	Oct. 27, 1920-40
Lexington Series T	Jan. 5, 1921-32
Liberty (Coupe)	Aug. 18, 1920-31
Lincoln	Sept. 8, 1920-34
McFarlan Type 147	Oct. 27, 1920-41
Mercer (limousine)	Aug. 18, 1920-37
Mercedes (Post War Model)	Oct. 20, 1920-33
Milburn Electric (38D & 38T)	Jan. 12, 1921-21
Moller	Mar. 30, 1921-21
Nash Four	Nov. 10, 1920-34
National (Sextet Phaeton)	Dec. 15, 1920-36
Navarre	Jan. 12, 1921-13
Northway 6	Jan. 12, 1921-13
Oldsmobile Light 8	Mar. 9, 1921-33
Oldsmobile (Model 43-A)	Dec. 15, 1920-33
Packard Single Six	Sept. 29, 1920-32
Paige Big Six (Six-66)	Sept. 1, 1920-34
Parenti	Jan. 12, 1921-14
Piedmont 4.30	June 29, 1921-30
Pierce-Arrow	Nov. 24, 1920-32
Premocar Special	Feb. 9, 1921-23
Rolls-Royce	Mar. 23, 1921-32
R & V Knight Four	Jan. 12, 1921-16
Scripps-Booth Six	July 13, 1921-32
Sheridan Eight	Oct. 6, 1920-32
Stanwood Six	Sept. 15, 1920-31
Sterling Knight	Feb. 2, 1921-11
Stevens-Duryea	Dec. 1, 1920-30
Wills-Sainte Claire	Mar. 16, 1921-23
Wills Sainte Claire Roadster	July 20, 1921-33

Trucks

Acme (½ ton)	April 13, 1921-33
Akron Multitruck (1 ton)	Feb. 9, 1921-32
Aries (5 ton)	Jan. 12, 1921-49
Armleder (1 ton)	Nov. 10, 1920-37
Available (1½ ton)	Aug. 4, 1920-32

Avery (1 ton)	Nov. 10, 1920-36
Bessemer (4 ton)	Jan. 12, 1921-30
Bollstrom (4 ton)	Nov. 24, 1920-34
Bridgeport (1½, 2½ & 6 ton)	Jan. 12, 1921-30
Brockway (Highway Express)	Jan. 26, 1921-25
Case (2 ton)	Feb. 16, 1921-16
Clinton (1½, 2½, 3½ & 5 ton)	Jan. 12, 1921-30
Commerce (Mercantile Exp.)	Nov. 10, 1920-27
Cyclone (1½ ton)	Mar. 30, 1921-32
Duplex (2½ ton)	Aug. 18, 1920-31
Federal (5-6 ton)	May 4, 1921-32
Gramm-Bernstein (1 ton)	Nov. 10, 1920-35
G. & J. (2 & 3½ ton)	May 11, 1921-32
G. M. C. (K-15, ½ ton; K-16, 1 ton; K-41, 3½ ton; K-101, 5 ton)	Mar. 2, 1921-28
Huffman (Models B & C 1 & 2½ tons)	June 29, 1921-30
Inter. Harvester (¾ ton)	Feb. 16, 1921-32
Kissel Speed Truck (1 ton)	Mar. 23, 1921-33
Lone Star (1½ ton)	Oct. 27, 1920-30
Lorain (2 ton)	Sept. 1, 1920-30
Mack (double red, axles)	Jan. 5, 1921-32
Moline farm truck (1½ ton)	Nov. 10, 1920-36
Pierce-Arrow (2 ton x 5, 3½ ton, W-2; 5 ton, r-10)	Sept. 8, 1920-30
Rainier (3½ & 5 ton)	Jan. 12, 1921-31
Republic (¾ ton)	July 20, 1921-33
Republic Express, Model 10	Mar. 30, 1921-21
Rumely (1½ ton)	Nov. 10, 1920-36
Service Speed Wagon (1 ton)	Feb. 16, 1921-32
Standard 5-K (5 ton)	Apr. 13, 1921-33
Stoughton (1 ton)	Feb. 23, 1921-33
Stoughton (1½, 2 & 3 ton)	Aug. 25, 1920-33
Transport (3½ ton)	Nov. 3, 1920-31
Waltham (1½ ton)	Aug. 3, 1921-29
Ward La France (5 ton)	Jan. 12, 1921-30
Wilson Four Wheel Drive	Aug. 10, 1921-32
Winther	Feb. 2, 1921-11

N. A. A. S. CHOOSES ADAIR AS SECRETARY-TREASURER

CHICAGO, Aug. 8—The board of directors of the National Association of Automobile Show and Association Managers has unanimously chosen Neal G. Adair, editor of Motor World, secretary and treasurer. He succeeds Ray W. Sherman, who resigned when he left the executive editorship of the Class Journal Co. to become merchandising director of the Automotive Equipment Association.

tion. E. E. Peake, secretary of the Kansas City Motor Car Dealers Association, is president of the Show Managers and Secretaries organization.

White in New Quarters

PORTLAND, ORE., Aug. 8—With the recent completion and occupancy of its building, the White company now possesses what is declared to be one of the most modern truck service and repair plants in the country.

MICHIGAN DEALERS GET CHAMBERLAIN BOOKLET

DETROIT, Aug. 9—The newly organized Michigan Automotive Trade Association has printed in booklet form P. E. Chamberlain's address on "Service the Most Important Factor of Your Business." The book is being circulated to the members of the association. It contains the observations on intelligent performance and selling of service made in addresses by Chamberlain in various parts of the country.

Specifications of Current Passenger Car Models

NAME AND MODEL	Engine Make	Cylinders: Bore and Stroke	WB	Tires	2-Pass.	5-Pass.	7-Pass.	Coupe	Sedan	NAME AND MODEL	Engine Make	Cylinders: Bore and Stroke	WB	Tires	2-Pass.	5-Pass.	7-Pass.	Coupe	Sedan
Ace.....G	Guy.	6-31x45	123	32x4	\$2975	\$2975	....	\$3680	\$3680	Maibohm.....B	Falls.	6-31x44	116	32x4	11575	11575	11750	\$2395	\$2395
Ace.....H	H-S.	6-32x45	123	32x4	2975	2975	....	3680	3680	Marmion.....34	Own.	6-32x45	136	32x4 1/2	4185	13985	3985	4875	5275
Ace.....L	H-S.	4-31x45	116	32x4	2260	2260	....	....	....	Maxwell.....25	Own.	4-32x45	109	30x3 1/2	845	845	1445	1545	
Allen.....Series 43	Own.	4-31x45	110	32x4	11385	1385	....	....	2195	McFarlan.....1921	Own.	6-41x6	140	33x5	6300	16300	6300	7500	7500
Ambassador.....R	Cont.	6-32x5 1/2	136	33x5	14500	14500	....	6500	6500	Mercur.....Series 5	Own.	4-32x45 1/2	132	32x4 1/2	4500	14500	*4500	5700	6200
American.....C	Own.	4-31x45	110	32x4	2195	2275	12350	3150	3150	Metz.....Cont.	6-31x44 1/2	119	32x4	2245	12245	....	....	....
Anderson.....Series 40	Own.	6-31x45 1/2	120	33x4	2195	1795	1845	2795	2795	Meteor.....R & RR	Dues.	4-41x6	129	32x4 1/2	5500	5500	....	....
Apperson.....8-21-S	Own.	8-31x45	130	34x4 1/2	....	3000	3250	4500	4500	Metz.....M6	Rut.	6-31x45	120	32x4	1995	1995	....	2795	2895
Apperson.....Anniversary	Own.	8-31x45	130	34x4 1/2	....	3600	3750	....	....	Mitchell.....F-40	Own.	6-31x45	120	33x4	1490	1490	....	2590	2690
Auburn.....6-39	Own.	6-31x45 1/2	120	32x4	....	1695	1695	2795	2795	Mitchell.....F-42	Own.	6-31x45	127	33x4	....	....	1795	....	....
Beggs.....20T	Cont.	6-31x44 1/2	120	32x4	1775	1775	....	2675	2775	Moller.....A	Own.	4-25x4	100	27x3 1/2	2000	....	....	....	....
Bell.....4-32	H-S.	4-31x45	114	31x4	....	1495	....	....	....	Monroe.....S-9 & 10	Own.	4-31x44 1/2	115	32x3 1/2	1295	1295	....	....	....
Bell.....6-50	H-S.	6-31x45	124	32x4	....	1695	....	....	....	Monroe.....S-11 & 12	Own.	4-31x44 1/2	115	33x4	....	....	2075	2175	....
Biddle.....81	Buda.	4-32x45 1/2	121	32x4	3475	3475	....	3975	3975	Moon.....6-48	Own.	6-31x44 1/2	122	32x4	2085	1985	2485	2985	2985
Birch Super-Four.....H-S.	4-31x45	117	33x4	1345	1345	1195	1195	2295	2295	Murray-Mac Six.....Own.	6-31x45 1/2	128	34x4 1/2	4250	4250	4250	....	....
Birch Light Four.....LeR.	4-31x45 1/2	108	30x3 1/2	1195	1195	....	....	....	....	Nash.....681-7	Own.	6-31x45	121	33x4	1525	1545	11695	2395	2695
Birch Light Six.....H-S.	6-31x45	117	33x4	1595	1595	....	....	....	....	Nash.....682	Own.	6-31x45	127	34x4 1/2	....	1695	....	....	....
Bour-Davis.....21S	Cont.	6-31x45 1/2	126	33x4 1/2	12385	12385	2385	....	....	Nash Four.....41-4	Own.	4-31x45	112	32x3 1/2	1175	1195	....	1735	1935
Brewster.....91	Own.	4-4 x5 1/2	125	32x4 1/2	17000	7000	....	10500	10500	National Sextet.....BB	Own.	6-31x45 1/2	130	32x4 1/2	2900	12900	2900	3990	3990
Briscoe.....4-34	Own.	4-32x45	109	31x4	1085	1085	....	1685	1685	Nelson.....D	Own.	4-31x44 1/2	104	32x4	....	1900	....	....	....
Brook.....S-21 A	Own.	2-31x43 1/2	90	28x3	395	....	....	....	....	Noma.....1C	Own.	6-31x44 1/2	128	32x4 1/2	3000	13200	....	4450	....
Buick.....1922-34-35-36-37	Own.	4-32x45 1/2	109	31x4	935	975	....	1475	1650	Northway.....Own.	6-31x45 1/2	128	33x5	4200	4200	6000	5600	5400	
Buick.....1922-44-5-6-7	Own.	6-32x45 1/2	118	33x4 1/2	1495	1525	....	2135	2435	Norwalk.....430-KS	Lyc.	4-31x45	116	32x3 1/2	....	1035	....	....	....
Buick.....1922-48-9-50	Own.	6-32x45 1/2	124	34x4 1/2	....	....	1735	2325	2635	Oakland.....34-C	Own.	6-21x44 1/2	115	32x4	1095	1145	....	1625	1725
Bush.....E.C.4	Lyc.	4-31x45	116	33x4	....	1195	....	....	....	Ogen.....6-60	Own.	6-31x45 1/2	134	33x5	13850	3750	3900	5000	5400*
Bush.....E.C.6	Rut.	6-31x45	116	33x4	....	1345	....	1750	1850	Oldsmobile.....43-A	Own.	4-31x45 1/2	115	32x4	11325	1345	....	1895	2100*
Cadillac.....59	Own.	8-31x45 1/2	125	34x4 1/2	3790	13790	....	4950	5190	Oldsmobile.....37A	Own.	6-21x44 1/2	112	32x4	11450	1450	....	2145	2145
Carroll.....C	Roeh.	6-31x45	128	35x5	....	3985	3985	3940	....	Oldsmobile.....46	Own.	8-21x44 1/2	122	33x4 1/2	....	1825	1875	....	2775
Carroll.....D	Roeh.	6-31x45	128	35x5	....	3185	3185	....	....	Oldsmobile.....47	Own.	8-21x44 1/2	115	33x4	....	1725	2225	2425	....
Case.....V	Cont.	6-31x45 1/2	126	34x4 1/2	....	12250	2250	2900	3285	Overland.....4	Own.	4-32x44	100	30x3 1/2	695	695	....	1000	1275
Chalmers.....6-30	Own.	6-31x44 1/2	117	32x4	1495	1545	....	2295	2445	Packard.....Single-Six	Own.	6-32x44 1/2	116	33x4 1/2	2975	2975	....	3750	3975
Chalmers.....6-30	Own.	6-31x44 1/2	122	33x4 1/2	....	....	1795	....	....	Packard.....Twin Six	Own.	12-3 x5	136	35x5	4850	4850	4850	6800	6800
Champion.....Tourist	Lyc.	4-31x45	113	32x3 1/2	....	1095	....	....	....	Paige.....6-42	Own.	6-31x45	119	32x4	1635	1635	....	2450	2570
Champion.....Special	H-S.	4-31x45	118	32x4	1395	1395	....	....	....	Paige.....6-66	Own.	6-31x45	131	33x4 1/2	12975	13295	2875	3755	3830
Chandler.....Six	Own.	6-31x45	123	33x4	1785	1785	2785	2885	....	Pan.....A	Own.	4-31x45	108	33x4	....	1500	....	....	....
Chevrolet.....490	Own.	4-31x44	102	30x3 1/2	625	625	....	975	975	Pan American E & F.....6-55	H-S.	6-31x45	121	33x4	2000	2000	2100	....	....
Chevrolet.....FB	Own.	4-31x45 1/2	110	33x4	975	975	....	1575	1575	Parenti.....1921	Own.	8-21x44 1/2	125	32x4	....	2000	....	3000	....
Cleveland.....40	Own.	6-3 x4 1/2	112	32x4	1295	1295	....	2195	2295	Paterson.....650	Cont.	6-31x44 1/2	120	33x4	....	1595	1625	2895	2895
Climber Four.....H-S.	4-31x45	117	32x4	1450	1385	....	....	....	....	Peerless.....56-S-7	Own.	8-31x45	125	34x4 1/2	....	12990	2990	3680	3950
Climber Six.....S	H-S.	4-31x45	125 1/2	32x4 1/2	2250	2250	....	....	....	Peters.....Own.	2-31x43 1/2	90	28x3	385	....	....	....	....
Cole.....870	North.	8-31x45	127	33x5	2550	2685	2795	3695	3995	Piedmont.....4-30	Lyc.	4-31x45	116	32x3 1/2	....	1270	....	....	....
Columbia Challenger.....Rut.	6-31x45	115	32x4	....	1495	....	....	....	....	Piedmont.....6-40	Cont.	6-31x44 1/2	122	32x4	....	1495	....	....	....
Columbia.....D-C & CS	Cont.	6-31x44 1/2	115	32x4	1795	1795	....	2495	2595	Pierce-Arrow.....Own.	6-4 x5 1/2	138	33x5	8000	17500	7500	8500	9000	
Comet.....C-53	Cont.	6-31x45 1/2	125	33x4 1/2	....	2350	2450	3650	....	Pilot.....6-45	Tector	6-31x45	120	32x4	1945	1895	....	....	....
Commonwealth.....44	H-S.	4-31x45	117	32x4	....	1395	....	2465	....	Pilot.....6-50	H-S.	6-31x45	126	32x4 1/2	2285	2285	2335	3350	3400
Crawford.....21-6-40	Lyc.	4-31x45 1/2	122 1/2	32x4	3000	3000	....	4500	....	Porter.....40	Own.	4-41x6 1/2	142	35x5	6750	Chassi s Price	....	....	....
Crow-Elkhart.....L63-65	Lyc.	4-31x45	117	32x3 1/2	11295	1295	....	....	....	Premier.....6-D	Own.	6-32x45 1/2	126 1/2	33x5	3790	13990	3890	4690	5190
Crow-Elkhart.....S63-65	H-S.	6-31x45	117	33x4	1545	1545	....	2395	....	Premocar.....6-40 A	Falls.	6-31x44 1/2	117	33x4	1295	1295	....	....	....
Daniels.....D-19	Own.	8-31x45 1/2	132	34x4 1/2	15350	15350	5350	6250	6950	Raleigh.....A-6-60	H-S.	6-31x45	122	32x4 1/2	2250	2250	....	3100	3200
Davis.....61-67	Cont.	6-31x44 1/2	120	33x4	11995	1895	12150	2795	2795	R & V Knight.....R	Own.	4-32x45	116	32x4	2150	2150	2850	2950	....
Dispatch.....Wise	4-32x45	120	34x4	1250	1350	1500	1525	1795	....	R & V Knight.....J	Own.	6-31x44 1/2	127	32x4 1/2	3350	13350	3350	4000	4200
Dixie Flyer.....H-S-70	H-S.	4-31x45	112	32x4	1415	1445	....	2295	2345	Reo.....T-6	Own.	6-31x45	120	33x4	1650	1650	....	2700	2750
Dodge Brothers.....Own.	4-32x45 1/2	114	32x4	935	985	....	1585	1785	....	Revere.....C	Dues.	4-41x6	131	32x4 1/2	4850	4650	14500	6500	....
Dorris.....6-80	Own.	6-4 x5	132	33x5	....	14785	4785	5800	6690	Roamer.....6-54-F	Own.	6-31x45 1/2	128	32x4 1/2	3150	13150	3250	13985	14100
Dort.....17-12	D-Ly	4-31x45	108	31x4	985	985	....	1535	1685	Roamer.....4-75-E	Own.	4-41x6	128	32x4 1/2	4150	3985	....	....	....
Dupont.....A	Own.	4-31x45 1/2	124	32x4 1/2	3400	13400	....	4900	....	Rolls-Royce.....Own.	6-41x4 1/2	143 1/2	33x5	....	U. S. Chassi s Price	11750	....	....
Elcar.....K-4	Lyc.	4-31x45	117	33x4	1195	1195	....	....	....	Romer.....Cont.	6-31x44 1/2	120	32x4	2000	2000	2100	2450	2750	
Elcar.....7-R	Cont.	6-31x44 1/2	117	33x4	11595	1595	11195	2395	2495	Saxon.....125	Own.	4-31x45	112	32x4	1545	1495	....	2295	2295
Elgin.....K-1	Falls.	6-31x44 1/2	118	33x4	1595	1495	11595	2395	2395	Sayers Six.....DP	Cont.	6-31x44 1/2	118	33x4	2195	2195	....	3295	....
Essex.....Own.	4-32x45	108	32x4	1445	1445	....	1950	2300	....	Scripps-Booth.....B-39-42	North.	6-21x44 1/2	115	32x4	11275	1295	....	1950	2100
Fergus.....S-5-21	Own.	6-31x45	126	33x4 1/2	....	Chassi s Price	8500	....	....	Scripps-Booth.....F-43-46	Cont.	6-31x44 1/2	115	32x4	1470	1490	....	2350	2875
Ferris.....Cont.	6-31x45 1/2	130	32x4 1/2	3350	....	2595	....	3675	....	Seneca.....L & O	LeR.	4-31x44 1/2	108	30x3 1/2	1045	1045	....	....	....
Ford.....T	4-32x44	100	30x3 1/2	370	11415	....	695	760	....	Severin.....Six	Cont.	6-31x45 1/2	122 1/2	33x4 1/2	1485	1485	....	2100	2250
Franklin.....9-B	Own.	6-31x44	115	32x4	2550	2550	12550	3650	....	Severin.....Six	Cont.	6-31x45 1/2	122 1/2	33x5	2550	2550	2550	3250	3350
Friend.....Four	Own.	4-31x44 1/2	112	32x3 1/2	1285	....	1985	2085	....	Sheridan.....4	North.	4-31x45 1/2	116	33x4	1485	1485	....	2060	2360

Specifications of Current Motor Truck Models

NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive
				Front	Rear						Front	Rear						Front	Rear	
Acason	1	\$1850	3 1/2 x 5	34x5 1/2	34x5 1/2	W	Concord, BX	2 1/2	\$3600	4 1/2 x 5 1/2	36x4	36x8	W	Gary, I	1 1/2	\$2550	4 1/2 x 5 1/2	36x3 1/2	36x5	W
Acason, R	1 1/2	2260	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Coak, 41	2	3000	4 1/2 x 5 1/2	36x8 1/2	36x7 1/2	W	Gary, J	2 1/2	3150	4 1/2 x 5 1/2	36x4	36x7	W
Acason, RB	1 1/2	2485	3 1/2 x 5 1/2	36x3 1/2	36x6	W	Corbett, E	2	2200	3 1/2 x 5 1/2	34x3 1/2	34x4	W	Gary, K	3 1/2	4050	4 1/2 x 5 1/2	36x5	40x5d	W
Acason, H	2 1/2	3295	4 1/2 x 5 1/2	36x4	36x4d	W	Corbett, D	1 1/2	2600	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Gary, M	5	5150	5 1/2 x 5 1/2	36x6	40x6d	W
Acason, L	3 1/2	4295	4 1/2 x 5 1/2	36x5	36x5d	W	Corbett, C	2	3150	4 1/2 x 5 1/2	36x3 1/2	36x7	W	Garsin M	1 1/2	3100	4 1/2 x 5 1/2	36x3 1/2	36x7	W
Acason, M	5	5250	5 1/2 x 5 1/2	36x6	40x12	W	Corbett, A	2 1/2	3300	4 1/2 x 5 1/2	36x4	36x7	W	Garsin K	2 1/2	3500	4 1/2 x 5 1/2	36x4	36x8	W
Aco, C	1 1/2	2295	3 1/2 x 5 1/2	34x3 1/2	34x5	W	Corbett, B	3 1/2	4100	4 1/2 x 5 1/2	36x5	36x10	W	Garsin	3 1/2	4500	4 1/2 x 5 1/2	36x5	40x12	W
Aco, A	2 1/2	2795	4 1/2 x 5 1/2	36x4	36x7	W	Cyclone, AA	5	5000	4 1/2 x 5 1/2	36x6	40x6d	W	Giant, 15-A	1 1/2	2250	3 1/2 x 5	34x3 1/2	34x5	W
Acme, G	1 1/2	.....	3 1/2 x 5	35x5 1/2	35x5 1/2	W	Cyclone A	1 1/2	2685	3 1/2 x 5	34x5 1/2	36x8 1/2	W	Giant, 16	2	3050	4 1/2 x 5 1/2	36x4	36x7	W
Acme, B	1 1/2	.....	3 1/2 x 5	34x3 1/2	34x5	W	Dart, S	1 1/2	.....	3 1/2 x 5 1/2	34x3 1/2	34x6	W	Giant, 17	3 1/2	4150	4 1/2 x 5 1/2	36x5	36x5d	W
Acme, F	1 1/2	.....	3 1/2 x 5	34x3 1/2	34x5	W	Dart, M	2 1/2	.....	4 1/2 x 5 1/2	36x4	36x7	W	Globe D-20	1 1/2	1495	3 1/2 x 5	33x4 1/2	33x4 1/2	B
Acme, A	2	.....	4 1/2 x 5 1/2	36x4	36x7	W	Day, W	3 1/2	.....	4 1/2 x 5	36x5	36x10	W	Globe	1	1495	3 1/2 x 5	33x5	33x5	B
Acme, C	3 1/2	.....	4 1/2 x 5 1/2	36x5	40x10	W	Day-Elder, A	1	2225	3 1/2 x 5	34x3 1/2	34x4	W	Golden West, GH	3	5000	4 1/2 x 5 1/2	36x6	36x7	W
Acme, E	5	.....	4 1/2 x 5 1/2	36x6	40x12	W	Day-Elder, B	1 1/2	2300	3 1/2 x 5	34x3 1/2	34x5	W	Golden West, G	3 1/2	4500	4 1/2 x 5 1/2	36x6	36x8	W
Akr'n Multi-Trk	1 1/2	1995	4 1/2 x 5 1/2	34x5	34x5	B	Day-Elder, D	2	2900	4 1/2 x 5 1/2	36x4	36x7	W	Golden West, H	3 1/2-4	5000	4 1/2 x 5 1/2	36x6	36x8	W
All-Power, C	3 1/2	5800	4 1/2 x 5 1/2	36x7	36x10	W	Day-Elder, C	2 1/2	2750	4 1/2 x 5	36x4	36x7	W	Golden West, T	4	5500	4 1/2 x 5 1/2	36x6	36x8	W
All-American, B-1	1 1/2	1795	3 1/2 x 5	32x4	32x4	I	Day-Elder, F	3 1/2	3700	4 1/2 x 5 1/2	36x5	36x5d	W	Golden West, K	7	6000	5 1/2 x 5 1/2	36x6	36x8	W
All-American C-1	1 1/2	2195	3 1/2 x 5	34x4	34x5	I	Day-Elder, E	5	4575	4 1/2 x 5	36x5	36x6d	W	Golden West, HA	7	6000	5 1/2 x 5 1/2	36x6	36x10	W
American, 25	2 1/2	3350	4 x 6	36x4	36x4d	W	Dearborn, F	1 1/2	2180	3 1/2 x 5 1/2	34x4	34x5	W	Gove, A-1	2 1/2	.....	4 1/2 x 5 1/2	36x4	36x7	I
American, 40	4	4275	4 1/2 x 6	36x5	36x5d	W	Dearborn, 48	2	2590	3 1/2 x 5 1/2	35x5 1/2	34x7 1/2	W	Graham Bros. A	1 1/2	2495	3 1/2 x 5	35x5 1/2	36x6 1/2	I
Aper, G	1	1675	3 1/2 x 5	33x5 1/2	33x5 1/2	I	Deane, G	1	1975	3 1/2 x 5	35x5 1/2	35x5 1/2	W	Gramm-Bern, 10	1	1495	3 1/2 x 5	33x5 1/2	33x5 1/2	I
Aper, D	1 1/2	1915	3 1/2 x 5 1/2	34x3 1/2	34x4	I	Deane, D	1 1/2	2550	3 1/2 x 5	35x5 1/2	36x8 1/2	W	Gramm-Bern, 15	1 1/2	2050	3 1/2 x 5	36x3 1/2	36x5	I
Aper, E	2 1/2	2605	4 1/2 x 5 1/2	36x4	36x7	I	Deane, E	2	2750	3 1/2 x 5	35x5 1/2	36x7 1/2	W	Gramm-Bern, 65	1 1/2	2725	3 1/2 x 5	36x3 1/2	36x5	W
Aper, F	3 1/2	3975	4 1/2 x 6	36x5	36x10	I	DeKalb, E2 1/2	2	2600	4 1/2 x 5 1/2	36x4	36x6	W	Gramm-Bern, 20	2	3175	4 1/2 x 5 1/2	36x4	36x7	W
Armstrong, 20	1	.....	3 1/2 x 5 1/2	34x3 1/2	34x5	W	DeKalb, E2	2 1/2	2250	4 1/2 x 5 1/2	34x3 1/2	36x5	W	Gramm-Bern, 25	2 1/2	3575	4 1/2 x 5 1/2	36x4	36x4d	W
Armstrong, HW	2 1/2	.....	4 1/2 x 5 1/2	36x4	36x7	W	DeMartini 1 1/2	1 1/2	2600	3 1/2 x 5	34x3 1/2	34x6	W	Gramm-Bern, 35	3 1/2	4375	4 1/2 x 5 1/2	36x5	40x5d	W
Armstrong, KW	3 1/2	.....	4 1/2 x 5 1/2	36x5	36x5d	W	DeMartini 2	2	3300	4 1/2 x 5	36x3 1/2	36x7	W	Gramm-Bern, 50	5	5275	4 1/2 x 6	36x6	40x6d	W
Atco, B	1 1/2	.....	3 1/2 x 5 1/2	34x5 1/2	36x6	I	DeMartini 3	3	4250	4 1/2 x 5 1/2	36x4	36x10	W	Hahn, J4	1	.....	3 1/2 x 5	34x5	34x5	W
Atco, B1	1 1/2	.....	3 1/2 x 5 1/2	34x5 1/2	36x6 1/2	I	DeMartini 4	4	4800	4 1/2 x 5 1/2	36x5	36x12	W	Hahn, CD	1 1/2	.....	4 1/2 x 5 1/2	36x3 1/2	36x6	W
Atco, A	2 1/2	.....	4 1/2 x 5 1/2	36x4	36x8	W	Denby, 12	1	1625	3 1/2 x 5	35x5	36x6	I	Hahn, EE	2 1/2	.....	4 1/2 x 5 1/2	36x4	36x8	W
AUaa, M.D	1	.....	3 1/2 x 5	32x4 1/2	32x4 1/2	W	Denby, 33	1 1/2	2300	3 1/2 x 5	35x5 1/2	36x7 1/2	I	Hahn, F	3 1/2	.....	4 1/2 x 5 1/2	36x5	36x10	W
Atterbury, 20R	1 1/2	2775	3 1/2 x 5	34x3 1/2	34x5	W	Denby, 134	2	2600	3 1/2 x 5	36x3 1/2	36x6	I	Hahn, EF	5	.....	4 1/2 x 6	36x6	40x12	W
Atterbury, 7CX	2 1/2	3375	4 1/2 x 5 1/2	36x4	36x4d	W	Denby, 25	3	3300	4 1/2 x 5 1/2	36x4	36x7	I	Hal Fur, E	1	2350	4 x 5	35x5 1/2	35x5 1/2	W
Atterbury, 7D	3 1/2	4175	4 1/2 x 5 1/2	36x5	40x5d	W	Denby, 27	4	4200	4 1/2 x 5 1/2	36x5	36x6d	I	Hal Fur, B	2 1/2	3250	4 1/2 x 5 1/2	35x5	38x7	W
Atterbury, 8E	5	5575	4 1/2 x 6	36x5	40x6d	W	Denby, 210	6	4850	4 1/2 x 5 1/2	36x6	40x6d	I	Hal Fur, F	3 1/2	4250	4 1/2 x 5 1/2	36x6	40x10	W
Autocar, 21UF	1 1/2-2	2300	4 1/2 x 5 1/2	34x4	34x5	D	Dependable, A	3 1/2-1	1650	3 1/2 x 5	34x5	36x6	W	Hall	1 1/2	3100	3 1/2 x 5	34x5 1/2	38x7 1/2	W
Autocar, 21UG	1 1/2-2	2400	4 1/2 x 5 1/2	34x4	34x5	D	Dependable, C	1 1/2	2350	3 1/2 x 5 1/2	34x3 1/2	34x5	W	Hall	2 1/2	3275	4 1/2 x 5 1/2	36x4	36x6	W
Autocar, 26Y	.....	4350	4 1/2 x 5 1/2	34x5	36x10	D	Dependable, D	2	2650	4 x 5 1/2	34x5	36x6	W	Hall	3 1/2	4100	4 1/2 x 5 1/2	36x5	36x5d	W
Autocar, 26-B	.....	4500	4 1/2 x 5 1/2	34x5	36x10	D	Dependable, E	2 1/2	2950	4 1/2 x 5 1/2	36x4	36x7	W	Hall	5	5100	4 1/2 x 5 1/2	36x5	40x6d	W
Available, H1 1/2	1 1/2	2750	4 x 5 1/2	36x3 1/2	36x5	W	Dependable, G	3 1/2	3550	4 1/2 x 6	36x6	38x7	W	Hall	7	5100	4 1/2 x 5 1/2	36x5	40x6d	C
Available, H2 1/2	2 1/2	3475	4 x 5 1/2	36x4	36x8	W	Diamond-T, O	1	2500	3 1/2 x 5 1/2	34x5 1/2	36x8 1/2	W	Harvey, WEA	1 1/2	2550	4 1/2 x 5 1/2	34x3 1/2	34x5	W
Available, H3 1/2	3 1/2	4475	4 1/2 x 5 1/2	36x5	40x5d	W	Diamond-T, FS	1 1/2	2960	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Harvey, WFA	2 1/2	3300	4 1/2 x 5 1/2	36x4	36x7	W
Available, H5	5	5375	4 1/2 x 6	36x6	40x12	W	Diamond-T, T	1 1/2	2650	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Harvey, WHA	3 1/2	4300	4 1/2 x 5 1/2	36x5	36x5d	W
Available, H7	7	6000	5 x 6	36x6	40x14	B	Diamond-T, U	2	3285	4 x 5 1/2	36x4	36x7	W	Harvey, WKA	5	5200	4 1/2 x 6	36x6	40x6 1/2	W
Avery	1	.....	3 x 4	34x5 1/2	34x5 1/2	I	Diamond-T, K	3 1/2	4675	4 1/2 x 5 1/2	36x5	36x5d	W	Hawkeye, K	1 1/2	1850	3 1/2 x 5 1/2	34x3 1/2	34x5	I
Beck, A. Jr.	1	1800	3 1/2 x 5	34x5 1/2	34x4	I	Diamond-T, EL	5	5400	4 1/2 x 5 1/2	36x6	40x6d	W	Hawkeye, M	2	2650	4 1/2 x 5 1/2	36x4	36x8	I
Beck, C	2	2550	4 1/2 x 5 1/2	36x4	36x6	I	Diamond-T, S													

Specifications of Current Motor Truck Models—Continued

NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES	Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES	Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES	Final Drive
				Front Rear						Front Rear						Front Rear	
Kelly-S, K-45	4	\$4550	4 1/2 x 6 1/2	36x5 36x5d	C	Ogden, A1	1 1/2	\$2550	3 1/2 x 5	36x3 1/2 36x5	W	Service, 71	3 1/2	\$4285	4 1/2 x 5 1/2	36x5 36x5d	W
Kelly-S, K-50	5	4900	4 1/2 x 6 1/2	36x5 36x5d	C	Ogden, E	2 1/2	3250	3 1/2 x 5	36x4 36x7	W	Service, 76	3 1/2	4485	4 1/2 x 5 1/2	36x5 36x5d	W
Kelly-S, K-55	6	5100	4 1/2 x 6 1/2	36x5 36x5d	C	Old Hickory, W	1 1/2	2175	3 1/2 x 5	36x3 1/2 36x4	W	Service, 101	5	5275	4 1/2 x 5 1/2	36x5 36x5d	W
Keystone, 40	2	2450	3 1/2 x 5 1/2	34x5 38x7 1/2	I	Old Reliable, A	1 1/2	2350	4 x 5	34x4 36x6	W	Signal, NF	1	2475	4 1/2 x 5 1/2	34x5 36x8 1/2	W
Kimball, AB	2 1/2	3675	4 x 6	36x4 36x7	W	Old Reliable, B	2 1/2	3500	4 1/2 x 6	34x4 36x4d	W	Signal, H	1 1/2	2925	4 1/2 x 5 1/2	34x4 36x6	W
Kimball, AC	3	3975	4 1/2 x 6	36x4 36x8	W	Old Reliable, C	3 1/2	4250	4 1/2 x 6	36x5 36x5d	W	Signal, J	2 1/2	3275	4 1/2 x 5 1/2	34x4 36x8	W
Kimball, AK	3	4500	4 1/2 x 6	36x4 36x10	W	Old Reliable, D	5	5250	4 1/2 x 6	36x6 40x6d	W	Signal, M	3 1/2	4275	4 1/2 x 5 1/2	36x5 40x5d	W
Kimball, AE	4	5000	4 1/2 x 6	36x5 40x12	W	Old Reliable, KLM	7	6000	4 1/2 x 6	36x6 40x7d	C	Signal, R	5	5300	4 1/2 x 6	36x5 40x6d	W
Kimball, AF	5	5975	5 x 6	36x6 40x7d	W	Oldsmobile Econ.	1	1250	3 1/2 x 5 1/2	35x5 35x5 1/2	I	Southern, 10	1	2090	3 1/2 x 5	34x3 1/2 34x4	W
Kissel, Express	1	1985 1/2	3 1/2 x 5 1/2	34x5 34x5 1/2	W	Olympic, A	2 1/2	3500	4 1/2 x 5 1/2	36x4 36x7	W	Southern, 15	1 1/2	2590	3 1/2 x 5 1/2	36x5 36x8 1/2	W
Kissel, Utility	1 1/2	2775	3 1/2 x 5 1/2	36x3 1/2 36x5	W	Oneida, A-9	1 1/2	2350	3 1/2 x 5 1/2	36x3 1/2 36x5	W	Southern, 20	2	2990	4 1/2 x 5 1/2	36x5 40x8 1/2	W
Kissel, Freight	2 1/2	3475	4 1/2 x 5 1/2	36x4 36x7	W	Oneida, B-9	1 1/2	2915	4 x 5 1/2	36x4 36x7	W	Standard, 1-K	1-1 1/2	1950	3 1/2 x 5 1/2	36x4 34x5	W
Kissel, H. D.	4	4475	4 1/2 x 5 1/2	36x5 36x5d	W	Oneida, C-9	2 1/2	3390	4 x 5 1/2	36x4 36x7	W	Standard, 76	2 1/2-3	3100	4 1/2 x 5 1/2	36x4 36x7	W
Kloster, AA	1	2600	4 1/2 x 5 1/2	34x3 1/2 34x5	W	Oneida, D-9	3 1/2	4345	4 1/2 x 5 1/2	36x5 36x10	W	Standard, 66	3 1/2-4	4000	4 1/2 x 5 1/2	36x5 36x10	W
Kloster, AB	1 1/2	3100	4 1/2 x 5 1/2	36x3 1/2 36x6	W	Oneida, E-9	5	5460	4 1/2 x 5 1/2	36x6 40x12	W	Standard, 5-K	5-6	5250	4 1/2 x 6	36x5 40x12	W
Kloster, BB	2	3600	4 1/2 x 5 1/2	36x4 36x7	W	Orleans, A	1 1/2	2750	3 1/2 x 5 1/2	36x3 1/2 36x5	W	Stirling, 1 1/2	1 1/2	3200	4 x 5 1/2	36x3 1/2 36x5	W
Kloster, B	2 1/2	4200	4 1/2 x 5 1/2	36x5 36x8	W	Orleans, B	2 1/2	3250	4 1/2 x 5 1/2	36x4 36x7	W	Stirling, 2	2	3500	4 x 5 1/2	36x4 36x6	W
Kloster, C	3 1/2	4900	4 1/2 x 5 1/2	36x5 36x5d	W	Orleans, C	3 1/2	3750	4 1/2 x 5 1/2	36x4 1/2 36x8	W	Stirling, 2 1/2	2 1/2	3650	4 1/2 x 5 1/2	36x4 36x6 1/2	W
Kloster, D	5	5600	5 x 6 1/2	36x6 40x12	W	Orleans, D	5	4250	4 1/2 x 5 1/2	36x6 40x8	W	Stirling, 3 1/2	3 1/2	4650	4 1/2 x 5 1/2	36x5 40x5d	W
Koolher, D	1 1/2	2700	3 1/2 x 5 1/2	34x3 1/2 34x5	W	Oshkosh, A	2	3750	3 1/2 x 5	36x5 36x7 1/2	4	Stirling, 5-W	5	5500	5 x 6 1/2	36x6 40x6d	W
Koolher, M	2 1/2	3850	4 x 5 1/2	36x4 36x7	W	Oshkosh, AA	2 1/2	3850	3 1/2 x 5	36x5 36x7 1/2	4	Stirling, 5-C	5	6000	5 x 6 1/2	36x6 40x6d	C
Koolher, MCS	2 1/2	3850	4 x 5 1/2	36x4 36x7	W	Oshkosh, BB	2 1/2	4300	4 x 5 1/2	36x5 38x7 1/2	4	Stirling, 7 1/2	7 1/2	6500	5 x 6 1/2	36x6 40x7d	C
Koolher, F	3 1/2	4300	4 1/2 x 5 1/2	36x5 36x10	W	Packard, EC	2 1/2	3500	4 1/2 x 5 1/2	36x4 36x7	W	Stewart, 11	1 1/2	1350	3 1/2 x 4 1/2	32x4 1/2 32x4 1/2	I
Koolher, MT, Trac	5	5000	4 1/2 x 5 1/2	36x5 36x7	W	Packard, ED	2 1/2	4100	4 1/2 x 5 1/2	36x5 36x5d	W	Stewart, 15	1 1/2	1875	3 1/2 x 5	35x5 1/2 35x5 1/2	I
L.M.C., C-28	2 1/2	2540	4 1/2 x 5 1/2	36x4 36x4d	I	Packard, EF	2 1/2	4500	5 x 5 1/2	36x5 36x5d	W	Stewart, 9	1 1/2	2200	3 1/2 x 5	34x3 1/2 34x5	I
Lange, B	2 1/2	3350	4 1/2 x 5 1/2	36x4 36x6	C	Packard, EX	2 1/2	4000	4 1/2 x 5 1/2	36x5 36x5d	W	Stewart, 7-X	2 1/2	2850	4 1/2 x 5 1/2	34x4 34x7	I
Larabee, U	1 1/2	2400	3 1/2 x 5 1/2	34x5 34x5	W	Paige, 52-19	1 1/2	4000	4 x 5 1/2	34x3 1/2 34x6	W	Stewart, 10	3 1/2	3850	4 1/2 x 5 1/2	36x5 36x5d	I
Larabee, SK	2 1/2	3200	4 1/2 x 5 1/2	36x4 36x7	W	Paige, 54-20	2 1/2	3400	4 1/2 x 5 1/2	34x4 34x4d	W	Stewart, 10-X	3 1/2	3850	4 1/2 x 5 1/2	36x5 36x5d	I
Larabee, FL	3 1/2	4000	4 1/2 x 5 1/2	36x5 36x5d	W	Paige, 51-18	3 1/2	4285	4 1/2 x 5 1/2	36x5 36x5d	W	Stoughton, A	1 1/2	1995	3 1/2 x 5 1/2	34x4 1/2 35x5 1/2	W
Larabee, FW	5	4900	4 1/2 x 6	36x6 40x6d	W	Parker, J20	2	3500	4 x 6	34x4 36x4d	W	Stoughton, B	1 1/2	2350	3 1/2 x 5 1/2	36x3 1/2 36x5	W
Leon, L	1	2350	3 1/2 x 5 1/2	35x5 35x5 1/2	W	Parker, J20	3 1/2	4400	4 1/2 x 6	36x5 40x5d	W	Stoughton, D	2	2800	4 x 5 1/2	36x4 36x7	W
Leedinghaus, C	1 1/2	2100	3 1/2 x 5 1/2	35x5 35x5 1/2	W	Parker, M20	5	5500	4 1/2 x 6	36x6 40x6d	W	Stoughton, F	3	3600	4 1/2 x 5 1/2	36x5 36x5d	W
Leedinghaus, W	1 1/2	2700	3 1/2 x 5 1/2	34x3 1/2 34x5	W	Patriot, Reverse	3 1/2	1795	3 1/2 x 5	35x5 35x5 1/2	W	Sullivan, E	2	3350	4 1/2 x 5 1/2	36x4 36x7	W
Macear, L	1 1/2	2925	4 1/2 x 5 1/2	36x4 36x6	W	Patriot, Lincoln	1 1/2	2450	4 x 5 1/2	34x3 1/2 34x5	W	Sullivan, H	3 1/2	4650	4 1/2 x 5 1/2	36x5 36x5d	W
Macear, H-2	2 1/2	3650	4 1/2 x 5 1/2	36x4 36x7	W	Patriot, Wash'n	1 1/2	3450	4 1/2 x 5 1/2	36x4 36x7	W	Superior, D	1	1650	3 1/2 x 5	34x4 1/2 34x4 1/2	I
Macear, M-2	3 1/2	4500	4 1/2 x 6	36x5 36x5d	W	Piedmont, 4-30	1 1/2	1885	3 1/2 x 5	34x4 34x4 1/2	W	Superior, E	2	2600	4 1/2 x 5 1/2	36x4 36x6	I
Macear, G	5	5500	4 1/2 x 6	36x5 40x6d	W	Pierce-Arrow	2	3750	4 x 5 1/2	36x4 36x4d	W	Super Truck, 50	2 1/2	3300	4 x 6	36x4 36x8	W
MacDonald, A	7 1/2	5750	4 1/2 x 6	40x7 40x14	I	Pierce-Arrow	3 1/2	4950	4 1/2 x 6	36x5 36x5d	W	Super Truck, 70	3 1/2	4300	4 1/2 x 6	36x5 40x5d	W
Mac, AB D.R.	1 1/2	3450	4 x 5	36x4 36x3 1/2d	D	Pierce-Arrow	5	5700	4 1/2 x 6	36x5 40x6d	W	Super Truck, 100	5	5300	4 1/2 x 6	36x5 40x12	W
Mich, AB	2 1/2	3400	4 x 5	36x4 36x4d	C	Pioneer, 50	1	1550	3 1/2 x 4 1/2	32x4 1/2 32x4 1/2	I	Super Truck 150	7 1/2	6300	5 x 6	36x6 40x7d	W
Mich, AB Chain	1 1/2	3000	4 x 5	36x4 36x3 1/2d	C	Pittsburgh, B 21	2 1/2-3	3800	4 1/2 x 5 1/2	36x4 36x7	W	Texas, A35	3 1/2	1095	3 1/2 x 5	33x4 33x4 1/2	I
Mich, AB Chain	3	3300	4 x 5	36x4 36x4d	C	Pony	1 1/2	400	2 1/2 x 4	28x3 1/2 28x3 1/2	C	Texas, TK39	1 1/2	1550	3 1/2 x 5	36x5 36x7	W
Mich, AB D.R.	2	3750	4 x 5	36x4 36x4d	D	Power, F	1 1/2	1100	3 1/2 x 5 1/2	36x5 36x6	W	Tiffin, GW	1 1/2	2695	4 1/2 x 5 1/2	36x3 1/2 36x5	W
Mich, AC Chain	3 1/2	4950	5 x 6	36x5 40x5d	C	Power, C	3 1/2	1100	3 1/2 x 5 1/2	36x5 40x10	W	Tiffin, MW	2 1/2	3580	4 1/2 x 5 1/2	36x4 36x3 1/2	W
Mich, AC Chain	5	5500	5 x 6	36x6 40x6d	C	Premcar, B-143	1 1/2	2475	3 1/2 x 5 1/2	36x5 36x7	W	Tiffin, PW	3 1/2	4760	4 1/2 x 5 1/2	36x5 40x5d	W
Mich, AC Chain	6 1/2	5750	5 x 6	36x6 40x12	C	Ramier, R-11	1 1/2	2150	3 1/2 x 5 1/2	35x5 35x5 1/2	W	Tiffin, P50	5	5850	4 1/2 x 6	36x6 40x6d	W
Mich, AC Chain	7	6000	5 x 6	36x7 40x7d	C	Ramier, R-19	1	2350	3 1/2 x 5 1/2	34x3 1/2 34x5	W	Tiffin, P60	6	6050	4 1/2 x 6	36x6 40x12	W
Mich, AC Chain	7 1/2	6400	5 x 6	36x7 40x7d	C	Ramier, R-16	1 1/2	2600	3 1/2 x 5 1/2	34x3 1/2 34x5	W	Titan, HT	3 1/2	4550	4 1/2 x 6	34x4 40x5d	I
Mich, AC Chain	10	5500	5 x 6	36x6 40x6d	C	Ramier, R-18	2	2950	4 1/2 x 5 1/2	34x4 34x6	W	Titan, HD	5	5400	4 1/2 x 6	36x5 40x6d	I
Mich, AC Chain	13	5750	5 x 6	36x6 40x12	C	Ramier, R20	2 1/2	3600	4 1/2 x 5 1/2	34x4 34x7	W	Titan, TS	2 1/2	3400	4 1/2 x 5 1/2	34x4 35x4d	I
Mich, AC Chain	15	6000	5 x 6	36x7 40x7d	C	Ramier, R-15	3 1/2	4500	4 1/2 x 5 1/2	36x5 36x5d	W	Tower, J	1 1/2	3000	4 1/2 x 5 1/2	35x5 38x7	W
Mapleleaf, AA	2	4150	4 x 5 1/2	36x4 36x7	W	Ramier, R17	5	5250	4 1/2 x 6	36x6 36x6d	W	Tower, G	2 1/2	3475	4 1/2 x 5 1/2	36x4 36x7	W
Mapleleaf, BC	3	4775	4 1/2 x 5 1/2	36x4 36x4d	W	Ranger, TK-20-2	2	1100	3 1/2 x 5	36x5 36x5 1/2	W	Tower, G	3 1/2	4400	4 1/2 x 5 1/2	36x5 36x5d	W
Mapleleaf, CC	4	5770	4 1/2 x 5 1/2	36x5 36x5d	W	Roe, F	3 1/2-11	1385	4 1/2 x 4 1/2	34x4 1/2 34x4 1/2	I	Traffic, C	1	1595	3 1/2 x 5	34x3 1/2 34x5	I
Mapleleaf, DD	5	6825	4 1/2 x 5 1/2	36x6 40x6d	W	Reliance, 10A	1 1/2	2400	4 x 5 1/2	36x5 36x5	I	Transport, 20	1 1/2	1395	3 1/2 x 5 1/2	34x3 1/2 34x4	I
Master, JW	1 1/2	2990	4 1/2 x 5 1/2	34x3 1/2 34x5	W	Reliance, 20B	2 1/2	3100	4 1/2 x 5 1/2	36x4 36x4d	I	Transport, 30	1 1/2	1995	3 1/2 x 5 1/2	36x3 1/2 36x5	I
Master, W	2 1/2	3290	4 1/2 x 5 1/2	34x4 36x7	W	Republic, 75	3 1/2	1895 1/2	3 1/2 x 5 1/2	32x4 1/2 32x4 1/2	I	Transport, 50	3 1/2	2785	4 1/2 x 5 1/2	36x4 36x7	I
Master, D	2 1/2	3540	4 1/2 x 5 1/2	34x4 36x7	D	Republic, 10	1	1695	3 1/2 x 5	35x5 35x5 1/2	I	Transport, 70	3 1/2	3885	4 1/2 x 6	36x5 36x10	I
Master, A	3 1/2	4190	4 1/2 x 6	36x5 40x5d	W	Republic, 10Exp. 11	1	2095	3 1/2 x 5 1/2	35x5 35x5 1/2	I	Traylor, B	1 1/2	2500	3 1/2 x 5 1/2	34x3 1/2 34x5	W
Master, E	3 1/2	4640	4 1/2 x 6	36x5 40x5d	D	Republic, 11X	1 1/2	2295	3 1/2 x 5 1/2	34x3 1/2 34x5	W	Traylor, C	2	3000	4 x 5 1/2	36x4 36x7	W
Master, B	5	5290	4 1/2 x 6 1/2	36x6 40x6d	W	Republic, 19	2 1/2	2795	4 1/2 x 5 1/2	36x4 36x7	I						

Specifications of Current Motor Truck Models—Continued

NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES Front Rear	Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES Front Rear	Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES Front Rear	Final Drive
Ward-LaF., 5A	5	\$3590	5 x 6 1/2	36x6 36x6d	W	Wichita, O	3 1/2	\$4000	4 1/2 x 6	36x5 36x5d	W	Winther, 430	1 1/2	\$2850	3 1/2 x 5	32x4 32x4	I
Watson, E	1	1865	3 1/2 x 5 1/2	34x4 1/2 34x4 1/2	W	Wichita, S	5	5000	4 1/2 x 6	36x6 40x6d	W	Winther, 39	1 1/2	2450	3 1/2 x 5	34x3 1/2 34x5	I
Watson, N	3 1/2	4250	4 1/2 x 5 1/2	36x5 36x5d	W	Wichita, AA	1	2100	3 1/2 x 5 1/2	36x4 36x4	W	Winther, 49	2	3250	4 x 5	34x4 34x4d	I
Western, W1 1/2	1 1/2	2550	4 1/2 x 5 1/2	36x3 1/2 36x5	W	Wichita, B	1 1/2	2775	4 1/2 x 5	36x4 36x5	W	Winther, 70	3 1/2	4200	4 x 5	36x5 36x5d	I
Western, L1 1/2	1 1/2	2550	4 1/2 x 5 1/2	36x3 1/2 36x5	W	Wichita, D	2 1/2	3300	4 1/2 x 5	36x4 36x5d	W	Winther, 450	4	5200	4 1/2 x 5	36x6 36x6d	I
Western, L2 1/2	2 1/2	3250	4 1/2 x 6	36x4 36x7	W	Wichita, E	3 1/2	4250	4 1/2 x 6	36x5 36x5d	W	Winther, 140	7	5900	4 1/2 x 6	36x6 36x6d	I
Western, W3 1/2	3 1/2	4250	4 1/2 x 6	36x5 40x5d	W	Wichita, F	5	5200	4 1/2 x 6	36x5 40x6d	W	Wisconsin B	1	1950	4 x 5 1/2	34x5 1/2 34x5 1/2	W
White, 15	2	3250	4 1/2 x 6	36x4 36x7	W	Wilson, EA	1 1/2	2270	3 1/2 x 5	36x3 1/2 36x5	W	Wisconsin C	1 1/2	2250	4 1/2 x 5 1/2	36x5 36x5d	W
White, 40	3 1/2	4200	4 1/2 x 6	36x5 40x5d	D	Wilson, G	3 1/2	2825	4 1/2 x 5 1/2	36x4 36x7	W	Wisconsin D	2 1/2	3500	4 1/2 x 5 1/2	36x6 36x6d	W
White, 45	5	4500	4 1/2 x 6	36x6 40x6d	D	Wilson, H	5	4520	4 1/2 x 6	36x6 40x6d	W	Wisconsin E	3 1/2	4000	4 1/2 x 5 1/2	36x7 36x7d	W
White Hich., E	1	2450	3 1/2 x 5	34x5 1/2 34x5 1/2	W	Winther, 751	3 1/2	1795	3 1/2 x 5	34x4 1/2 35x5 1/2	I	Witt-Will, N	1 1/2	2750	3 1/2 x 5	36x3 1/2 36x5	W
White Hich., H	1 1/2	2750	3 1/2 x 5	36x3 1/2 36x5	W	*2-cyl. 16-cyl. 18-cyl. All others, not marked, are 4-cyl. Tractor, Tractor. **Canadian made.											
White Hich., K	2 1/2	3350	4 1/2 x 5 1/2	36x4 36x5	W	Final Drive: W—Worm, I—Internal Gear, C—Chain, D—Double Reduction, B—Bevel, 4—Four-Wheel, E—External Gear, *Tires—optional, †Pneumatic Tires. All others solid. ††—Price includes body. ‡—Price includes several items of equipment.											
Wichita, K	1	2300	3 1/2 x 5 1/2	36x3 1/2 36x4	W							Wolverine, J	1 1/2	2125	3 1/2 x 5	34x5 1/2 34x5 1/2	I
Wichita, L	1	2600	3 1/2 x 5 1/2	36x3 1/2 36x5	W							Wolverine, J	1 1/2	2375	3 1/2 x 5	34x5 1/2 34x5 1/2	I
Wichita, M	2	2800	3 1/2 x 5 1/2	36x3 1/2 36x6	W							Wolverine, J	2	2640	3 1/2 x 5	34x5 1/2 34x5 1/2	I
Wichita, R	2 1/2	3000	3 1/2 x 5 1/2	36x4 36x7	W							Wolverine, L	3 1/2	4100	4 1/2 x 5 1/2	36x5 36x5d	I
Wichita, RX	2 1/2	3600	4 1/2 x 6	36x4 36x8	W							Yellow Cab M21	1 1/2	2025	3 1/2 x 5	32x4 32x4	B
												Yellow Cab M41	1 1/2	2350	3 1/2 x 5	34x4 1/2 34x4 1/2	W

Farm Tractor Specifications and Prices

TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Plow Capacity	TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Plow Capacity	TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Plow Capacity	
All-In One	16-30	\$1975	3	Clim.	4-5 x 6 1/2	GDK	3-4	Gray, 1920	18-36	\$2000	3	Wauk	4-4 1/2 x 6 1/2	Gas.	4	Port Huron, A	12-25	\$1700	4	Chief	4-4 1/2 x 6	G.K.	3	
Allis-Chalm. B	6-12	925	2	LeR.	4-3 1/2 x 4 1/2	Gas.	1	Ground Hog	19-31	2000	4	Erd.	4-4 x 6	GorK	3	Post, D	12-20	1800	4	Wauk	4-4 1/2 x 5 1/2	GorK	2	
Allis-Chalm. G.P.	6-12	850	2	LeR.	4-3 1/2 x 4 1/2	Gas.	1-2	Gr. Western St.	20-30	1950	4	Beav.	4-4 x 6	K.	4	Prairie Dog, L	9-18	650	3	Wauk	4-3 1/2 x 4 1/2	Gas.	2	
Allis-Chalm.	12-20	1495	2	Mid. W	4-4 1/2 x 5 1/2	Gas.	2-3									Prairie Dog, D	15-30	1250	4	Wauk	4-4 1/2 x 6 1/2	Gas.	3	
Allis-Chalm.	18-30	2150	4	Own	4-4 1/2 x 6 1/2	GorK	3-4	Hart-Parr, 20	20	905	4	Own	2-5 1/2 x 6 1/2	K.D	3	Ranger Cul	8-16		4	LeR.	4-3 1/2 x 4 1/2	Gas.	1	
Allis-Chalm.	10-18	875	4	Own	4-4 1/2 x 6 1/2	G.K.	4	Hart-Parr, 30	30	1595	4	Own	2-6 1/2 x 7	K.D	3	Reed, T-20	15-30	2250	4	Dom	4-4 1/2 x 6	K.	3-4	
Allwork, 2-G	14-28	1875	4	Own	4-4 1/2 x 6 1/2	GorK	3	Holder, C	9-16	1170	4	Wauk	4-4 1/2 x 5 1/2	G.K.	2	Reed, A-1	18-36	2400	4	Dom	4-5 x 6	Gas.	4	
Allwork, C	14-28	1675	4	Own	4-5 x 6	GorK	3	Holder, C	12-20	1395	4	Wauk	4-4 1/2 x 6 1/2	G.K.	3	Reliable	10-20	985	4	Own	2-6 x 7	Ker.	2	
Andrews-Kin, D	18-36	2500	4	Clim.	4-5 x 6 1/2	GorK	4	Holder, Cult	6-10	1050	4	LeR.	4-3 1/2 x 4 1/2	Gas.	1	Rex	12-25	1600	4	Wauk	4-4 1/2 x 5 1/2	GorK	3	
Appleton	12-20	1500	4	Buda	4-4 1/2 x 5 1/2	G.K.	2-3	Hicks	20-30		4	Wauk	4-4 1/2 x 6	KorG	4	Russell	12-24	1500	4	Own	4-4 1/2 x 5 1/2	GorK	2-3	
Are, 1921	3-5	550	4	Own	1-4 1/2 x 5	Gas.	1	Huber Light 4	12-25	1185	4	Wauk	4-4 1/2 x 5 1/2	GorK	3	Russell	15-30	2200	4	Own	4-5 x 6 1/2	GorK	3-4	
Aultman-T.	15-30	2200	4	Clim.	4-5 x 6 1/2	G.K.	6	Huber Super 4	15-30	1885	4	Midw.	4-4 1/2 x 6	Gas.	3	Russell	20-35	3000	4	Own	4-5 1/2 x 7	GorK	4-5	
Aultman-T.	22-45	3850	4	Own	4-5 1/2 x 8	G.K.	6									Russell	30-60	5000	4	Own	4-8 x 10	GorK	4-10	
Aultman-T.	30-60	5000	4	Own	4-7 x 9	G.K., D	8	Illinois, Super	18-36	2500	4	Clim.	4-5 x 6 1/2	G.K.	4	Samson, M		795	4	Nov.	4-4 x 5 1/2	G.K.	2	
Automet, B-3	12-24	1785	4	Here.	4-4 x 5 1/2	Gas.	2-3	Imperial, C	40-70	5000	4	Own	4-7 1/2 x 9	G.K., D	10	Sandusky, J	10-20	1250	4	Own	4-4 1/2 x 5 1/2	G.K., D	2	
Avery, SR, Cul	5-10		4	Own	4-3 x 4	G.K.		Indiana, F	5-10		2	LeR.	4-4 1/2 x 5 1/2	Gas.	1-2	Sandusky, E	15-35	1750	4	Own	4-5 x 6 1/2	G.K., D	4	
Avery, Cult-C	5-10		3	Own	4-3 x 4	G.K.	2	International, A	8-16	900	4	Own	4-4 1/2 x 5	G.K., D	2	Shawnee Com	6-12		2	LeR.	4-3 1/2 x 4 1/2	Gas.	10	
Avery, B	5-10		4	Own	6-3 x 4	G.K.	2	International, L	15-30	1750	4	Own	5-4 x 8	G.K., D	4	Shawnee Com	9-18		2	Gry	4-3 1/2 x 5			
Avery, C	8-16		4	Own	2-5 1/2 x 6	G.K., D	2-3	J-T, N	20-40	3485	*2	Chief	4-4 1/2 x 6	G.K., D	3-4	Shelby, D	15-30		4	Beav.	4-4 1/2 x 6	G.K.	3	
Avery, D	12-20		4	Own	4-4 1/2 x 6	G.K., D	2-3	Klumb, F	16-32	1650	4	Clim.	4-5 x 8 1/2	Gas.	4-6	Shelby, C	10-20		4	Erd.	4-4 x 6	GorK	2-3	
Avery, E	12-25		4	Own	2-6 1/2 x 7	G.K., D	3-4	Knaus, 1920	25-45	2500	4	Own	4-5 x 9	Gas.	4-6	Short Turn	20-40	1500	3	Beav.	4-4 1/2 x 6	G.K.	3	
Avery, F	14-28		4	Own	4-4 1/2 x 7	G.K., D	4-5	LaCrosse, M	6-12	900	4	Own	2-4 x 6	G.K.	1	Square T., A	18-35	2075	3	Clim.	4-5 x 6 1/2	K.G.	3	
Avery, G	18-36		4	Own	4-5 1/2 x 6	G.K., D	4-5	LaCrosse, G	12-24	1250	4	Own	2-6 x 7	GorK	3	Steady Pull	12-24	1485	4		4-4 x 5	Gas.	3	
Avery, H	25-50		4	Own	4-6 1/2 x 7	G.H.D	5-6	Lauson	12-25	1495	4	Midw.	4-4 1/2 x 5 1/2	Gas.	3	Stinson, AE	18-36	1335	4	Beav.	4-4 1/2 x 6	G.K.	4	
Avery, I	45-65		4	Own	4-7 1/2 x 8	G.K., D	8-10	Lauson	15-25	1685	4	Beav.	4-4 1/2 x 6	GorK	3-4	Stinson	20-40	2250	4	Beav.	4-4 1/2 x 6	G.K.	4	
Bates	15-25		4	Own	4-4 1/2 x 6	Ker.	3	Lauson	15-30	1885	4	Beav.	4-4 1/2 x 6	GorK	3-4	Tiege, 3	15-27	2625	4	Wisc.	4-4 1/2 x 6	Gas.	3-4	
Bates Mule, H	15-25		4	Midw	4-4 1/2 x 5 1/2	Gas.	3	Leader, B	12-14	1095	4	Own	2-6 x 8 1/2	G.K., D	2-3	Titan	10-20	900	4	Own	2-6 1/2 x 8	G.K., D	3	
Bates Mule, F	18-25		2	Midw	4-4 1/2 x 5 1/2	Gas.	com.	Leader, N	16-32	1895	4	Clim.	4-5 x 8 1/2	G.K.	3-4	Tore Cultivator	6-10		3	LeR.	4-3 1/2 x 4 1/2	Gas.	2	
Bates Mule, G	25-35		2	Midw	4-4 1/2 x 6	Gas.	com.	Leader, GU	18-35	2775	*2	Clim.	4-5 1/2 x 8 1/2	G.K.	3-4	Townsend	10-20	1200	2	Own	4-6 1/2 x 7	Ker	2-3	
Bean	8-16		1	Own	4-3 1/2 x 4	G.K.	2-3	Leonard, E	20-30	2530	4	Buda	4-4 1/2 x 6	G.K.	3	Townsend	15-30	1800	2	Own	4-7 x 8	Ker	3-4	
Beeman, G	2-4	315	4	Own	1-3 1/2 x 4 1/2	Gas.	1	Liberty, A	18-32	2475	4	Clim.	4-5 x 8 1/2	G.K.	4	Townsend	25-50	3000	2	Own	4-8 1/2 x 10	Ker	4	
Best	30		2	Own	4-4 1/2 x 6 1/2	G.K., D	8-9	Linn, H4J	40	4500	4	Cont.	4-4 1/2 x 5 1/2	Gas.	4	Traction Motor	40-50		4		8-3 1/2 x 5	Gas.	4	
Best	60		2	Own	4-6 1/2 x 8 1/2	G.K., D	8-9	Linn, W	60	5100	4	Wauk	4-5 x 8 1/2	Gas.	6	Traylor, TB	6-12	715	4	LeR.	4-4 1/2 x 5 1/2	Gas.	1	
Boring, 1921	15-30	1850	3	Wauk	4-4 1/2 x 6 1/2	GorK	3-4	Little Giant, B	16-22	2200	4	Own	4-5 1/2 x 6	K.	4	Triumph, H	18-36	2450	2	Erd.	4-4 1/2 x 6	Ker.	4	
Burn-Oil, 1921	15-30	1650	4	Own	2-6 1/2 x 7	Ker.	3-4	Little Giant, A	20-35	3300	4	Own	4-5 1/2 x 6	K.	6	Trumdar, 10	25-40	3750	*2	Wauk	4-5 x 6 1/2	GorK	4	
Capital	15-30	1000	2	Own	4-4 1/2 x 6	Gas.	3	Lombard	35-150		*2	Own	6-5 1/2 x 6 1/2	Gas.	16	Turner, 1921	14-25	1295	4	Buda	4-4 1/2 x 5 1/2	G.K.	3	
Case	10-18	1090	4	Own	4-3 1/2 x 5	GorK	2	Lombard	50		*2	Own	4-4 1/2 x 6 1/2	Gas.	6-10	Twin City	12-20	1580	4	Own	4-4 1/2 x 5 1/2	G.K.	3	
Case	15-27	1690	4	Own	4-4 1/2 x 6	GorK	3	Magnet, B	14-28	1875	4	Wauk	4-4 1/2 x 6 1/2	K&G	3	Twin City	20-35	3175	4	Own	4-5 1/2 x 6 1/2	G.K.	5	
Case	22-40	3100	4	Own	4-5 1/2 x 6 1/2	GorK	4-5	Master Jr.	5-10	585	4	LeR.	2-5 1/2 x 4	Gas.	1	Twin City	40-65	5250	4	Own	4-7 1/2 x 9	G.K.	8	
Caterpillar T11	25		2	Own	4-4 1/2 x 6	Gas.	4	Merry Gar 1921	2	230	2	Evin	1-2 1/2 x 2 1/2	GorK	3-4	Uncle Sam C20	12-20	1385	4	Weid.	4-4 x 5 1/2	G	2-3	
Caterpillar T16	40	2500	4	Own	4-4 1/2 x 6	Gas.	4	Minne. All-P	12-25	1200	4	Own	4-4 1/2 x 7	GorK	3	Uncle Sam B19	20-30	2300	4	Beav.	4-4 1/2 x 6	GorK	3-4	
Centaur	5-2 1/2	455	2	NWay	2-4 1/2 x 5 1/2	GorK	1-9	Minne. G.P.	17-30	1850	4	Own	4-4 1/2 x 7	GorK	3-4	Uncle Sam D21	20-30	1985	4	Beav.	4-4 1/2 x 6	GorK	3-4	
Chase	12-25	2100	3	Buda	4-4 1/2 x 5 1/2	G.K.	2-3	Minne.				Own	4-4 1/2 x 7	GorK	3-4	Universal	1-4	475	2	Own	1-3 1/2 x 5	G	1	
Chicago	40	2500	4	Own	4-4 1/2 x 6	Gas.	4	Minne.	22-44	3300	4	Own	4-6 x 7	GorK	5-6	Utilitor, 501	2 1/2 x 4	380	4	Own	1-3 1/2 x 4 1/2	G	5-6	
Cletrac, W	12-20	1495	2	Own	4-4 x 5 1/2	G.K., D	2-3	Med. Duty	35-70	4800	4	Own	4-7 1/2 x 9	GorK	8-9	Volie, Biltwell	12-24	1750	4	Own	4-4 1/2 x 5 1/2	G.K., D	3	
Dakota, 4	15-27	1750	3	Dom.	4-4 1/2 x 6	Gas.	3-4	Mohawk 1921	8-16	785	4	Light	4-3 1/2 x 4 1/2	KorG	1-2	Victory, 1921	9-18	1350	9	Gray.	4-3 1/2 x 5	Gas.	3	
Dart, B.J.	15-30	2100	4	Buda	4-4 1/2 x 6	Gas.	3-4	Moline Univ D	9-18	900	2	Own	4-3 1/2 x 5	Gas.	2-3	Victory, 1921	15-30	1750	4	Wauk	4-4 1/2 x 5 1/2	Gas.	3	
Depue, A	20-30	2500	4	Buda	4-4 1/2 x 6	Gas.	3	Moline Orch	9-18	1075	2	Own	4-3 1/2 x 5	Gas.	2-3	Vim, B	15-30	1650	4	Wauk	4-4 1/2 x 5 1/2	Gas.	3	
Dill, D	20	2480	4	Cont.	4-4 1/2 x 5 1/2	Gas.	3	Meter Macul.	1 1/2	195	2	Own	1-2 1/2 x 3 1/2	Gas.	2-3	Wallis, K	15-25	1600	4	Own	4-4 1/2 x 5 1/2	G.K.	3	
Do-It-All, R.W.	20	2980	4	Midw	4-4 1/2 x 6	Gas.	3	Motox	15-30	2250	4	Buda	4-4 1/2 x 6	GorK	3-4	Waterloo, N	12-25		4	Own	2-6 1/2 x 7	G.K.	3	
Do-It-All	-7	595		Own	1-4 1/2 x 5	Gas.	3	NB	1	3-6	425	4	Own	2-3 1/2 x 4	Gas.	3	Webfoot, 53	28-53	5250	*2	Wisc.	4-5 1/2 x 7	G.D	6
Eagle, F	12-22	1390	4	Own	2-7 x 8	GorK	3-4	NB	2	3-6	425	4	Own	2-2 1/2 x 4	Gas.	3	Wellington, B	12-22	900	4	Erd.	4-4 x 6	Ker.	2-3
Eagle, F	16-30	1850	4	Own	2-8 x 8	GorK	4-5	Nichols-Shep.	20-42	3100	4	Own	S x 10	GorK	3-6	Wellington, F	16-30	1400	4	Chief	4-4 1/2 x 6	Ker.	3-4	
E-B, AA	12-20	1445	4	Own	4-4 1/2 x 5	GorK	3	Nichols-Shep.	25-50	3400	4	Own	9 x 12	GorK	4-7	Western, 1920	16-32	2100	4	Clim.	4-5 1/2 x 6	G.K.	3	
E-B, Q	12-20	925	4	Own	4-4 1/2 x 5	GorK	3	Nichols-Shep.	25-50	3400	4	Own	9 x 12	GorK	4-7	Westmore	12-25	1650	4	Wauk	4-4 x 5 1/2	G.K.	3	
E-B, Q	16-32	2000	4	Own	4-5 1/2 x 7	GorK	4	Nichols-Shep.	25-50	3400	4	Own	9 x 12	GorK	4-7	Wharton, E	12-20	1800	3	Buda	4-4 1/2 x 5 1/2	Gas.	2	
Evans	18-30	2000	4	Buda	4-4 1/2 x 6	G.K.	3	Nichols-Shep.	25-50	3400	4	Own	9 x 12	GorK	4-7	Whitney	9-18	1175	4	Own	2-5 1/2 x 6 1/2	Gas.	2	
Fagot, D	9-12	1525	4	Lye.	4-3 1/2 x 5	Gas.	2	Nichols-Shep.	25-50	3400	4	Own	9 x 12	GorK	4-7	Wichita, T	15-30	2500	4	Beav.	4-4 1/2 x 6	G.K., D	3-4	
Farm Horse, B	18-30	1855	4	Clim.	4-5 x 6 1/2	G.K.	3-4	Nichols-Shep.	25-50	3400	4	Own	9 x 12	GorK	4-7	Wisconsin, E	16-30	2250	4	Clim.	4-5 x 6 1/2	Ker.	4	
Farquhar	15-25		4	Buda	4-4 1/2 x 6	G.K., D	3-4	Nichols-Shep.	25-50	34														

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Climbing Toward It!



How the

Demand for Economy Has Affected Motor Car Design

This Story Tells How the Engineers' Combined Talents Are Working to Produce Better and Cheaper Cars—It Furnishes Talking Points That Talk the Language of the Day

By J. EDWARD SCHIPPER

NOW that the summer is waning, it is possible to cast about and get some sort of ideas on what we have in engineering development this year. The year 1921 will not be known as one in which drastic changes were made, and yet some of the detail developments which have taken place are of the highest importance and as a period of progress it takes its place with as high standing as probably any other year in the industry.

The year 1921 is remarkable in that it has been a transition period in the sales world. It has been during this time that we have passed from a sellers' market to a buyers' market and, consequently, as would be expected in a period of this kind, we have gone through an era of dropping prices. We have found the factories in the automobile business faced with a twofold problem.

It has been necessary for them to economize in their plants and in their manufacturing costs in order to meet lower prices and, on the other hand, it has been necessary

for them to produce a better grade of product in order to meet the more exacting demands of a highly critical and almost a penny-pinching public. It would not require much imagination to see that this would naturally be reflected in the engineering and production sides of the factories. In so many words the engineer and production man have been told to make the car better and yet cheaper. Thus, in the manufacturing world, we find that the burden has been thrust upon these two departments as well as upon the purchasing agent. The latter has been forced to exert every influence to bring down the price of material and manufactured parts, as well as to so wisely purchase that he is able to reduce the inventory which he had accumulated during the time when orders were out to buy everything possible. At that time it was necessary to have the plant full of material in order to meet the busy manufacturing schedule and to get this material regardless of cost before somebody else bought up the available supply.

REALIZING full well that the humor of the public has been such that features of economy appeal more than any other at this particular time, it is not surprising to find that on all of the new models which have been brought out to date a strong effort has been made to secure not only economy as regards fuel, but also in tire mileage. We see, in the matter of tire equipment, that the cord tire is being adopted as standard by leading manufacturers, in spite of the fact that the price of the car has been reduced and the cord tire costs the manufacturer more. This has been done solely for the purpose of giving the car salesman the talking point of better tire mileage from the original set of tires, and, in place of a 3000-mile set of tires being placed on the new car, the owner is given a set which may last from 15,000 to 20,000 miles.

In the matter of gasoline economy, we find that never before has the intake manifold been studied so carefully with an idea of providing the best possible distribution of the gases and, consequently, the greatest maximum economy

in fuel mileage. When Packard brought out their new little six they put the fuelizer on this car as standard equipment, and on their dynamometer test, before an engine is allowed to pass inspection, it must show a gasoline consumption which is not greater than what would amount to 20 miles per gallon on the car.

The new Buick four, which has just been announced, incorporates a manifold heater which is interconnected with the throttle so that more hot exhaust gas is admitted at low speed and less at high, so that during the idling periods it is not necessary to run an over-rich mixture in order to obtain regular firing, with the consequent waste of fuel and the carbonizing of the cylinders and fouling of the spark plugs. There is not a new model brought out which has not received concentrated attention as regards the intake manifold. The more scientific use of the exhaust gases for pre-heating the incoming charge is one of the distinguishing features of 1921 progress and will be reflected in better performance of the 1922 cars, both in

winter and in summer.

The trends which have been noticed during the previous year are all being continued and even accentuated for the 1921-22 models. We see the detachable cylinder head in all of the new cars. In fact, there has not been a new model brought out this year which does not incorporate this feature. On the new Buick the valve cages have been cut out and the valves are directly in the detachable head, which is a move for simplicity which will be appreciated from the maintenance end and also from the performance end because of the cooler valves.

The trend toward the overhead valve engine still continues. We see the new Durant model incorporating an engine of this type to be built for them by the Continental Motors Corp. We find the new Buick continues its characteristic overhead valve engine in the new four-cylinder model which it has just brought out. We find this same type of construction in the Ansted engine, used in the Lexington model. It is also in the new Gray-Beall engine, which has been

adopted by the Saxon company. On the other hand, the new Packard six is an L-head engine. Reo continues in its 1922 models the practice of putting one valve on the side and the other in the head. This construction is also used by Essex and will be continued without change. The addition, however, of the two or three new overhead valve engines brings up the percentage column again, as it has moved forward in the last five years annually to show that the trend is toward this type. The fact that engines of the overhead valve type are so designed that the mechanism is just as quiet as that of the L-head has had a lot to do with the popularizing of the overhead valve engine.

Another trend which has been marked in previous years and which is continuing to grow is that of the high-pressure oiling systems. There are two schools of lubrication now employed in American passenger cars. One is to use a great quantity of oil under high pressure, so that the oil not only lubricates the bearings, but cools them. The other uses a moderate amount of oil fed at a moderate pressure and allows this circulating system to take care only of the main bearings and timing gears of the engine, with the cylinder walls taken care of by splash. We find the latter system incorporated in Studebaker and Buick as two good examples. This is the old type of lubrication which has been a characteristic of American cars for some time, and is known as the circulating splash. The pressure lubricating system, however, is coming in more markedly each year, and we might readily consider this as one of the leading trends of the year, in spite of the fact that in actual numbers there have been only two or three new recruits to the system. However, we know that leading consulting engineers in Detroit are now designing a high-speed, two-bearing, six-cylinder engine of small dimensions which incorporates the high-pressure system. One of the advantages claimed for this is that the clearance of the main bearings can be up to .003 in., even when the engine is new, because of the certainty of maintaining a sufficient oil film to fill this clearance volume. This permits of a new engine being run at high speeds directly it is delivered to the owner and does away with the necessity for breaking in the engine by holding the car down to 20 m.p.h. for the first 500 to 1000 miles.

There is not a trend which has been noted in 1921 which cannot be said to have been continued for 1922. It is only necessary to mention these for everyone to realize the increase in such things as the heavier crankshaft, more carefully balanced shaft, lighter pistons, longer connecting rods, greater cooling volume and greater accessibility in such parts as the oil pump and other units in the

engine which require periodical inspection in their maintenance.

Regarding the other parts of the car, it cannot be said that changes are as noted as they are in the engine, and this is not to be wondered at when we consider that the problems involved are not nearly as intricate. As far as clutches are concerned, we do not expect to find any marked changes, although the tendency toward the dry-disk type seems to be continuing, while the use of other types continues to drop off. In the propulsion mechanism there is one

Answering the Cry, "Economy"

DO you know what the factories are doing to meet the new conditions under which dealers must sell motor cars?

Do you know how engineering departments at the fountains of production are reacting to the nation-wide cry of "economy"?

This story was written with the express purpose of telling these things. It tells how the combined talent of the engineers is working to make cars better and cheaper. It tells how strong efforts have been made in recent models to secure not only economy as regards fuel, but also in tire mileage.

It provides good, sound, substantial, truthful mechanical "talking points"—the kind of talking points that TALK TO THE CUSTOMER'S PURSE. And things that have happened in the last few months indicate that the customer's purse is a pretty good thing to talk to.

You'll find in this story also an interesting discussion of what may be expected in mechanical development in the next few years. It is surcharged with a wealth of valuable information for dealers.

Let's read it right now!

marked tendency which is of great value to the automobile owner as well as to the garageman and this is the practice of so arranging the front universal joint that its lubrication is automatic from the transmission. This does away with the necessity for bothering with the lubrication of a part which is most centrally located beneath the floor of the car and, consequently, the most difficult to reach. The installation of better chassis lubricating methods is to be commended, and the growing use of the Alemite system and the employment of automatic lubrication on the Saxon car, for example, are points which bring out this tendency.

Another point in the chassis in which we see some small change is in the greater use of disk wheels. In the final analysis of the disk wheel proposition, however, it is not to be expected that disk wheels are going to be sold on their engineering merits because the race between the wood wheel and the disk wheel is too close for the ordinary layman to base his determination on which is the better wheel.

If we were to draw aside the veil of the future for a little while we would see some very interesting developments which are coming in the automobile industry, not this year or next, but which inevitably will make their presence felt. In the laboratories of some of our consulting engineers and some of the big

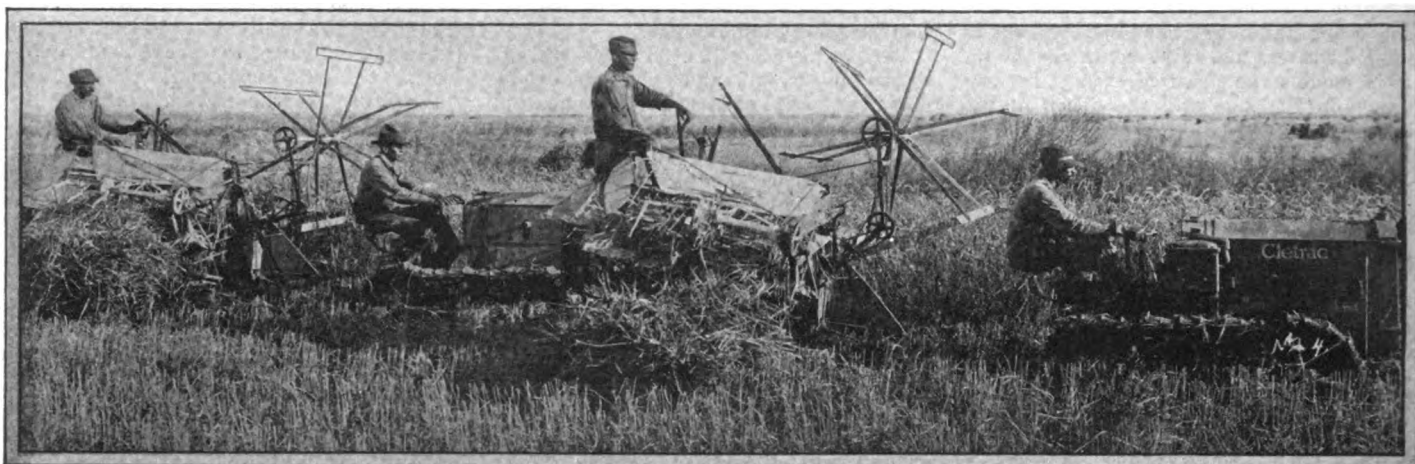
manufacturers who are not only manufacturing in the present, but experimenting in the future, there are some interesting things which cannot be disclosed in detail. At the meetings of the Society of Automotive Engineers some of these things are discussed, and the subject of doped automobile fuel is one of the most interesting. With the doped fuel it is possible to use compression pressures which are far in excess of anything possible on ordinary gasoline. This results in a power output per given volume of gasoline which is almost unbelievable under present standards. Not only this, but the doped fuel is of such a chemical nature that it does not detonate, or, in plain words, it does not knock, regardless of how much carbon may have accumulated in the cylinders. In fact, the only effect that carbon accumulations have with the doped fuel is that they further increase the compression because of the volume of combustion chamber which they occupy.

Another interesting thing is that of the air-cooled car. We are accustomed to think of the air-cooled car as the product of one or two manufacturers and not ever likely to become a product which is generally made by other concerns, and yet experiments on air-cooled cars and with cylinders of aluminum and with cylinders on which the copper cooling bins have been unified with the iron cylinders to such an extent that a true metallic bond is established are under way. It may be years before these products become generally used, or it may be never, but they contain strong commercial possibilities.

Another thing which is coming is the simplified gearshift. It is possible that in five years from today gearshift levers may not be found on any new automobiles. If the gearshift is replaced by a simple finger-operated device or its equivalent, it is very likely that the hand-operated emergency brake lever will go with it, so that a perfectly clear floor board may be expected in the front of the car. The number of devices which render such a thing possible is increasing every year, and not only that, but several companies are already incorporated and endeavoring to get into production on devices which support this prediction.

It would be possible to draw a picture of the eventual car which may not be far out of line with what is actually going to come to pass, but it is only intended here to bring out the idea that this industry is continually endeavoring to improve itself, and the day will never come when the automobile, regardless of how good it is, will be considered perfect.

And the automobiles which we are bringing out in 1922 are all mighty good cars and at present prices startlingly good values for the money.



Two tractors and four men took the place of twelve mules and six men harvesting rice—and the performance is SELLING for the dealer who sold the tractors. This story tells HOW.

SOLD!

500 Tractors in 500 Working Days

*That's What One Dealer in New Orleans Did in Two States
—And, He Says, the Field Isn't Scratched Yet—Here's
How He Did It*

THERE'S a man in New Orleans who was wise enough, when he came through the great European conflict, to turn from the tanks of war in which he had gone over the top on the other side the Atlantic, to the tanks of peace on this side. He didn't bother getting back into "civies," for the khaki and the pigskin were just as useful in the furrow as they had been in the trench.

That was a little more than two years ago. In the year and a half which ended with the first day of December, 1920, this man put 500 of the tanks of peace—almost one a day—over the top and into the farms of Louisiana and Mississippi, with only the southern part of Mississippi to work on at that. And, he has been selling strongly in 1921.

HIS name is J. W. Bronson: he was a captain or a major or a colonel, or something like that, over there, but over here he is general manager of the Farm and Industrial Implements Co., Inc., with "G.H.Q." at 1537-39 Canal Street, New Orleans. He has a lot of unusual ideas, many of them at square variance with the ideas of most automotive vehicle dealers and distributors, but, while you read these ideas, don't forget that these same ideas, converted into methods, have sold 500 tractors in 500 days. They're worth an ear for a minute.

"The tractor is its own best salesman. Once you get a tractor at work in a community, you do not need salesmen. If it is a success, it will sell itself, and the owner will help it sell.

"Service cannot be given for nothing, yet we are putting in one of the largest tractor service departments in the South.

"Advice which will save the tractor owner and operator the greater part of his service costs, IS GIVEN FREE, and

Tractor Just as Easy to Advertise as Limousine If You Make Your Ads Pull

A MAN who has sold 500 tractors in a limited southern territory in two years—almost one for every working day of that period—says: "It's just as easy to get results from tractor advertising as from advertising a \$12,000 limousine—if you know how to make your ads 'pull' the man who NEEDS the tractor, just as strongly as the limousine ad 'pulls' the man who has \$12,000 to spend."

The man is J. W. Bronson, of New Orleans. Read how he does it.

if followed, will get better results from the tractor, prolong its life, and reduce operating expenses.

"Tractor distributors and dealers should take advantage of the press in other ways than in paid advertising. Stories of failure of animal motive power, through disease, epidemics, or scarcity of stock, and stories of the high cost of animals and of labor, can be turned to account among the tractor 'prospects' and we are so using them."

These are just a few of the things that have enabled Bronson to place so many tractors in so short a time.

The situation as to tractors in the South is simply this: The people who bought tractors during the past three, two or one years were unfamiliar with them. The tractor differs from the passenger car in that the owner of the tractor seldom operates it, but turns it over to employees, who have little interest in the success or failure of the machine, and so the tractor has little op-

portunity to prove what it is really worth.

To remedy this, to lessen this evil, Bronson is taking men into his repair department and training them as tractor operators and tractor mechanics. The great reduction in the number of calls for repair men shows that these trained drivers and mechanics are helping to keep the tractors at work all the time.

Bronson believes that the tractor is its own best salesman, and in communities where one tractor has been sold, and is doing the work for which it was bought in a satisfactory manner, others will be bought within a short time without solicitation or demonstration, except such demonstration as the farming community gets from the one already in operation. The Standard Oil Company of Louisiana, for instance, has been using two Cletracs for some time in place of four- and six-mule teams at its refinery at Baton Rouge. The work of these two tractors has brought inquiries from half a dozen corporations desiring to replace their mules with tractors, after having seen the performance of this pair.

A number of Louisiana and Mississippi towns are using tractors in road work, and this is a field which is still barely touched by tractor demonstrators and salesmen. Franklin, Lafayette, Bogalusa, in Louisiana, and Biloxi and Poplarville, in Mississippi, are among the towns so using Bronson's tractors.

The Ever Widening Sales Circle

A year and a half ago not one of these towns was using tractors. Bronson succeeded in getting a tractor into one of these towns. The work it did was so satisfactory that gradually orders came from the governments of these other towns, and orders are still coming in from towns, villages and parishes whose officials have seen these tractors at work in the towns named. So the tractor sales go, in ever-widening circles from the first satisfactory sale. "The distributor must see to it that the dealer makes no sale in which the tractor does not do the work demanded," says Bronson, "and the dealer must see that the buyer is completely satisfied with the tractor he gets and the equipment he buys with it. Presently results will come in the shape of further orders from other prospects who have seen this first tractor at work. No one can tell how far the ripples will roll from the smallest stone cast into a pool, and just so, no one can say how many tractor sales will result from one satisfied purchaser."

This is the great reason for giving so much attention to the service department and for compelling all dealers, under pain of losing their contracts, to do the same thing. A 24-hour service has been established, and more attention is paid to this right now than to sales. Every order received every day must be disposed of by 4 p. m. All Bronson's dealers have the same service system, and the dealers are allowed virtually all

the profit on parts. This sort of service is the keynote to sales of the tractor.

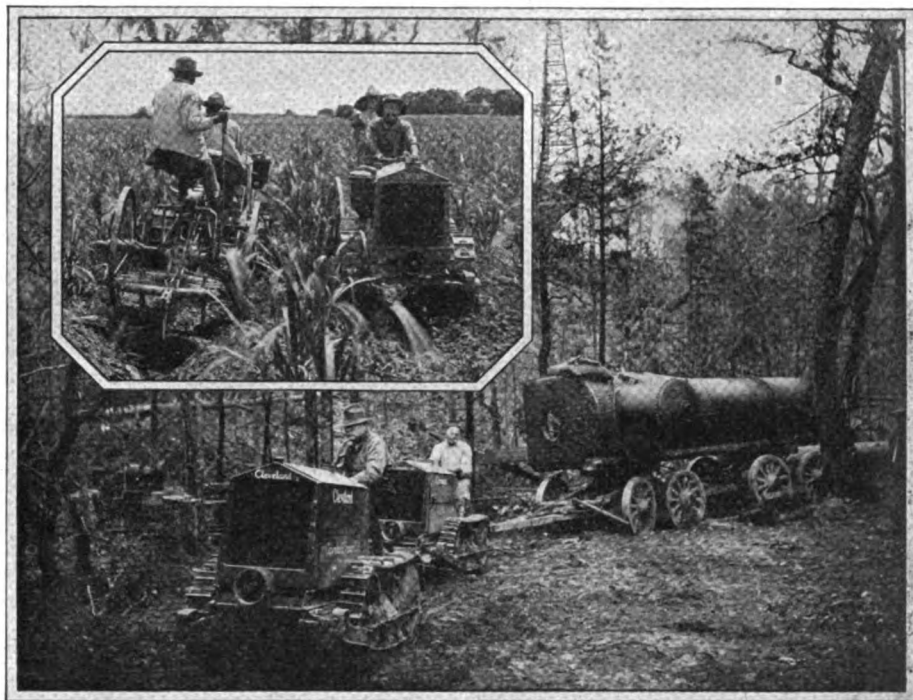
Equipment for Special Work Important

The lack of proper implements and equipment for agricultural work has held back the tractor industry in the farms of the South. Only last month Bronson remodeled an old Avery stubble-destroyer, built for use with mules, to co-ordinate with a Cletrac tractor, and this implement sold for one-third

built in quantity by some of the implement makers to whom it has been offered, will be built in New Orleans. This plow differs from the mule plow in that it has a power lift frame, built to take a variety of adjustments, mold boards of differing sizes, etc., and that it will clean up a whole row, or less than a row, as desired. It is a universal implement, several types of which could be used successfully with tractors in the South.

In the cotton country, which has been slow to accept the tractor, also because

Performance Is What Sells the Tractor



Here are two examples of the kind of work that J. W. Bronson of New Orleans, who sold 500 tractors in 500 working days, found for his tractors. "The tractor is its own best salesman," says Bronson, "and this is how to make them sell"

more than its original cost. This tractor and stubble-destroyer, with two men, replaced eight mules and four men, and did twice as much work in a day as did these men and mules. In other words, it accomplished the same results every nine hours as eight men and sixteen mules would have done.

Cotton Offers Big Market

The delay in the production of special implements for the sugar, rice, cotton and lumber industries is that the implement manufacturer, called on for implements for these industries, takes down his map, sees a small spot of sugar bowl, a narrow strip of cotton belt or a small square of rice pocket, and cares nothing for it, makes no attempt to devise or construct implements which will do the work demanded of them. For this reason this company has gone into the industry of building, rebuilding and remodeling agricultural implements for use with tractors.

An example of this is a new cane-cultivating plow, which is proving a success and which, if it is not taken up and

of lack of proper agricultural implements to go with it, the new two-row lister is opening the field to the tractor. In fact, through the use of this lister, Bronson expects to put two or three hundred tractors into the cotton country next year. Inquiries on the cane-cultivating plow have come from India, Porto Rico, Cuba, South America, Central America and the Philippines, showing again how one successful implement, used in one locality, will advertise itself wherever there is need for such an implement all over the world.

"Demonstration, service, instruction, and a good tractor adapted to the work to be done—those combined form the answer to the question: 'How can I sell tractors?'" says Bronson.

In a dozen words in the preceding paragraph Bronson has epitomized the secret of successful tractor merchandising. In these words he has mentioned the big forces that are going to operate to bring the tractor as a selling factor to a peak far above any previous heights attained by the industry. And, the time to develop these forces is NOW.

Pinched? No, Just Invited to a Live Dealer's Used Car Sale

The Story of How Traffic Notices Addressed to License Numbers of Cars Parked on Curb Got 2,000 Prospects and 36 Sales in Three Days

DIRECT results of a three-day sale of used cars, heralded as "An Automobile Bargain Carnival," and wherein some unusual newspaper advertising and a brand new publicity "stunt" with Y. M. C. A. boys as principals, were features, are tabulated by Herbert Bros., Philadelphia distributor of Chandler and Cleveland cars, as follows:

Approximately 300 persons attended the sale, representing 225 groups.

Thirty-six used cars were sold in the three-day period. The offering was of one hundred cars of varied type and sixteen makes.

A new list of twenty-seven active prospects was opened, with two of whom sales virtually have been closed and at least one-third of which number may be counted as very probable purchasers in the near future—all in the used-car line.

Two sales of new cars have been directly traceable to the used-car carnival. Seven active new-car prospects have been listed as a result of the used-car sale.

Indirect results from the sale are noted in a stiffening of efficiency in the sales organization and an increased grasp of concentrated effort to produce. Of course, it is expected that sales and prospect results, not immediately apparent, will develop in time.

Taken as a whole, the sale had unusually satisfactory features. In one respect it demonstrated how special sales ability in an individual will come to the fore. For instance, a bonus was offered to the salesman who should do the most effective work. The man who won it not only outdid his competitors on the staff to the required point, but also sold about 25 per cent of all the cars disposed of at the three-day sale.

The sale also demonstrated that it pays to study out the precise type of advertising that will appeal to the general used-car buyer, as well as to the largest number of used-car buyers. It

is the theory of this house that it is better to use a less dignified and less conservative kind of publicity for a special sale of used cars than is its usual practice in advertising new cars. Hence, such popular handling of the advertising text as is revealed in the excerpts herewith quoted:

"On Sundays and holidays, when the people next door and the family across the street pack up a cold lunch and all the fixin's and start for the country, or some good fishing hole—maybe it's a trout stream and a camp fire, but away they go—your wife and kiddies look on with many a wish that they were situated so that they could go, too. The only reason for not going is just a car. At this sale you can get just the car you want for a very little money and plenty of time to pay for it."

"When you leave home, to-morrow morning, bring along your check book—or at least a cash deposit of \$100, or \$200, so that you will be able to make a deposit on the car you select while you still can. Bear in mind there will be at least ten buyers for every car on hand and it will be a case of first come, first served. Not a car will be reserved—we will play no favorites—Friends, or Acquaintances—all will be treated alike, and it will be first come, first served."

"We have talked with the man who is out of work and cannot buy—we have talked with the fellow that is looking around for his uncle in the country. We have had a number of boys who drifted in just to look around, but to-day we are going to ask time-killers to go bathing and leave room around the front entrance for those who come here to transact business."

The nature of the clientele sought for this occasion also explains such unusual expressions in the Herbert Bros.' advertising as these sub-heads: "Pay as You Ride"; "Free Driving Lessons"; "Cash or Time—You Name the Terms," and "Buy the Wife and Family a Car—Buy It Now and Buy It Here."

The hundred cars, which included renewed and rebuilt automobiles, factory samples and demonstrators, carefully overhauled and placed in an attractive setting, for the period of August 4, 5 and 6, consisted of town cars, coupes, sedans, touring cars and roadsters in the following makes: Fords, Chevrolets, Dodges, Buicks, Chandlers, Cleverlands, Saxons, Paiges, Studebakers, Overlands, Velies, Dorts, Maxwells, Chalmers, Lexingtons and Oaklands.

Not only were extraordinary points

The Used Car Sale's Direct Results

- 1—Drew 300 persons.
- 2—Effected sale of 36 cars.
- 3—Supplied new list of 27 ACTIVE prospects and more than 2,000 names of car owners for prospect list.
- 4—Brought about sales of two new cars.
- 5—Supplied 7 ACTIVE new car prospects who probably will buy in the immediate future.

Indirect Results

- 1—Stiffened efficiency of sales organization, making them more eager to "produce" quickly and showed them how this can be done.
- 2—Demonstrated several principles cited in this story.

of the sale brought out in the publicity, but ordinary practices that would bear emphasis for the purpose were stressed in the newspapers, such, for instance, as "free driving lessons."

Each sale carried a five-day privilege of return and exchange. The advertisements read: "Drive any car five days and if at the end of that time you find the car is not just what we have represented it to be, drive the car back and we will allow every dollar paid on it to apply on any car in stock."

Newspaper space eight columns wide and the length of the paper and seven columns wide and seventeen inches long was taken, and symbolic cuts made from line drawings were used. The display resembled, somewhat, those of a department store bargain event.

The new publicity "stunt," in which the Y. M. C. A. boys figured, was sprung on the second day of the sale and was as follows:

General Manager Berrien had printed 2000 circulars typed entirely in red. These circulars, each fitting, unfolded, into a long manila envelope, 9½ x 4¼ inches, bore the heading "Important Traffic Regulation," and read:

*"Beginning Friday, August 5, for two days, traffic will be unusually heavy around Herbert Brothers, Broad and Race Streets, where they are holding a great two-day used car sale. Buyers rushing from all points will congest traffic. Watch your step—drive carefully—give the new drivers a chance—right now is a good time to trade the 'bus' on a fine renewed car. Read our big ads in the Philadelphia papers about this sale. Prices and terms right.
"Heads Up—Drive Carefully—Send Your Friends to the Sale."*

The envelope bore the inscription: "Pennsylvania License No. . .," to be filled out with the actual license number of the car in which the notice was placed, and the additional legend in the lower left-hand corner "Important: Traffic Notice."

One never having received a police warning notice would suppose he had received a summons to the office of a

magistrate for some violation of the city traffic regulations.

That is the idea which Herbert Bros. were not at all displeased to convey, because of the decidedly pleasant reaction following on reading the contents of the envelope. A reaction like this is sure to help stamp the incident and occasion for the notice in the memory. As a matter of fact, several who later called to purchase showed these notices and commented on the fact that they were relieved to know they had not been "pinched."

The 2000 circulars or notices having been printed and delivered, the general manager selected eight Y. M. C. A. boys to place a notice on the driver's seat of each of a certain type of car parked at the curb in Broad Street and other important traffic arteries downtown. So that there would be no waste circulation, or as little as possible, each boy was supplied with a typewritten list of the only kinds of cars in which the notices were to be placed. The instructions told them to leave notices only in the smaller and less expensive cars. On selecting the car for the notice, each boy was to obtain the license number from the car and copy it on the space on the envelope to be filled in. In each case, the owner, or driver, on entering his car, would find the envelope addressed to his particular license number, this giving it the surprising personal note. The cars selected for these notices were such as could be purchased within \$250 of the price of one of the specially overhauled used cars for the sale.

Each boy was obliged to bring back a list of the license numbers of the cars in


which he had placed his notices and this served, of course, the double purpose of checking up each lad's work, as well as supplying Herbert Bros. with a remarkably good new prospect list of 2000 names, for of course the names and addresses of the owners of the cars whose license numbers were taken, were im-

mediately looked up on registration lists.

The boys distributed the entire 2000 notices in a single day and their pay was \$2 apiece, or \$12 for the crew.

That the "stunt" was effective was, of course, proved by the notices shown and the joking comments thereon by purchasers at the sale.

These Notices Sold Used Cars. Read How.



EASY TERMS
PAY AS YOU RIDE

ONLY TWO DAYS MORE
SALE ENDS SATURDAY NIGHT
COME AT ONCE

IMPORTANT TRAFFIC REGULATION
Beginning Friday, August 13th, for two days, traffic will be unusually heavy around Herbert Brothers, Broad and Race Streets, where they are holding a great two-day, used car sale. Buyers rushing from all points will congest traffic. Watch your step—drive carefully—give the new drivers a chance—right now is a good time to trade the "beat" on a fine renewed car. Read our big ads in the Philadelphia papers about this sale. Prices and terms right.
Hands Up! Drive Carefully—Send Your Friends to the Sale

Pennsylvania License No. _____

IMPORTANT
Traffic Notice

Car owners thought they were "pinched" when they saw these notices on the driver's seat, left by Y. M. C. A. boys. This story tells how they SOLD used cars

HERBERT BROTHERS
Broad at Race Street
DISTRIBUTORS OF CHANDLER AND CLEVELAND CARS
OPEN EVENINGS

Today and Tomorrow
Are Buyers' Days

SATISFACTION
If you are not satisfied with the car you have bought, we will refund your money. No questions asked. If you are not satisfied with the car you have bought, we will refund your money. No questions asked. If you are not satisfied with the car you have bought, we will refund your money. No questions asked.

FREE
If you want to see the car you have bought, we will refund your money. No questions asked. If you want to see the car you have bought, we will refund your money. No questions asked. If you want to see the car you have bought, we will refund your money. No questions asked.

A Dealer Policy Worth Talking About

Many an Automotive Merchant Might Find a "Sermon" to Fit His Needs in the Statement of a New York Rural Dealer to His Customers

THE Judge Auto Co. of Nyack and Spring Valley, N. Y., which has the Ford franchise in Rockland County, has issued an impressive book giving "The History of the Ford in Rockland County."

The book, printed for circulation among Ford owners and prospects in the dealer's territory, gives an excellent picture of the Judge company's facilities for serving the Ford owning public in sales, service, replacement parts and accessories. It also tells something about the growth of Ford ownership in Rockland County, which has progressed from 125 cars sold for \$62,500 in 1914 to 225, worth \$120,450, sold in 1920. Total sales of the Judge company since 1914 have been 1506 cars valued at \$690,854. The company's 1921 contract calls for 325 cars and a complement of trucks and Fordson tractors.

The Judge company has built its business on a foundation of service to customers, which may best be related in the concluding words of the book itself:

"When purchasing a car one should give special consideration to the company behind the sale. The company must

be a dependable one—not in business for to-day only, but for to-morrow and for years to come. The ownership, management and solid, conservative policy of the Judge Auto Co. is the same as it was when we began business.

"There MUST be a reason for our expansion. It is based on the integrity of our dealings since the company began in one little salesroom on the Turnpike. 'Satisfied customers' had been one of our earliest slogans. We did not wish to create a clientele merely because we were selling good automobiles. We wanted clients who would become our friends, and to that end have endeavored to give SERVICE of the very highest character. That we have succeeded is evident.

"Our customers can feel assured that our efficient service department has been organized for the sole purpose of serving them and that it will continue to be at their call as long as the Judge Auto Co. sells automobiles. Old friends know this and new ones have only to make our acquaintance to realize that our obligations do not end with the sale of a car.

"The Judge service, like the cars repre-

sented by the company, is built upon a standard. It has been established through many years of giving our patrons every consideration not only at the time of purchase but for all time. Back in 1908, when the motor car was still a 'contraption,' we began our selling career, and there was much pioneering to be done. Each year, despite difficulty and discouragement, we built upon the foundation laid for our present highly successful business. To-day we occupy a unique position, but we are not resting on our laurels—we're pressing forward.

"There is a feeling of satisfaction in dealing with a company such as ours, which is qualified by personnel, experience, knowledge and equipment to give the utmost in sales and service. Keeping our objective in view—that of giving the best possible service—we had to develop a highly efficient organization. This had to be departmentized so that the work would come directly under the supervision of specialists. The service features presented herewith have been progressively developed in order to afford every patron the greatest satisfaction.

Sales Promotion Week Observed in Automotive Equipment Field

Jobbers and Manufacturers Strongly Support First Big Move of A. E. A. to Extend Merchandising Help to Retail Dealers

SALES Promotion Week, the opening gun of the great educational movement of the Automotive Equipment Association to inspire and produce better merchandising of automotive products, was observed by a large proportion of the jobbers and manufacturers during the week beginning Aug. 6.

While the detailed application of the idea varied according to the individuality of the concerns interested, it followed generally the plan suggested by Ray W. Sherman, merchandising director of the A. E. A.

Fundamentally the plan set in motion a "Big Brother" movement on the part of the jobbers who extended to their dealers and garagemen, through their salesmen, practical assistance in selling automotive equipment. The keynote of the project was expressed by Sherman in a bulletin to the jobbers in the following words: "The dealer who sells equipment to the customer is anxious to increase his equipment business, but does not always know how to. In most cases he is willing to be shown, and the most effective means of showing him is actual example."

IN applying the idea the jobbers held meetings of their salesmen or wrote letters to them explaining the object of the special merchandising week and asking them to devote a part of their time during the week to suggesting better retail merchandising methods to the dealers and garagemen and assisting them in putting them into actual practice.

And so, throughout the country, jobber salesmen, during Sales Promotion Week, assisted in trimming display windows, suggested aggressive means of selling various items and assisted the dealers and garagemen in putting the suggestions into practice, served customers at the gasoline pump at the curb and gave examples of intensified merchandising activities under such conditions, and assisted generally in spreading the idea of greater automotive equipment sales through more aggressive selling effort.

Reports from various sections of the country indicate that the jobbers were co-operating strongly in the first activity of new sales promotion movement that has been inaugurated by the Automotive Equipment Association, and that definite results, even at this early date, had been observed.

Following are some of the mid-week reports on the progress of the activity:

Cleveland Concerns Hold Dealer Sales Contest

CLEVELAND, Aug. 10—The Philectric Co., 1745 Euclid Avenue, is offering \$100 in cash prizes for the most interesting letter describing successful methods for increasing sales of automotive merchandise and service. This contest is open to the management and employees of automotive equipment stores, garages and service stations. Rules for

the contest were mailed 10 days ago to 2500 dealers, garages and service stations in northern Ohio.

This contest is being conducted in connection with sales promotion week of the Automotive Equipment Association.

The H. W. Johns-Manville Co., which also is taking advantage of the special occasion to increase sales, has urged dealers to make especially attractive displays of accessories made by it. "Help the dealer dress up attractive displays—it accomplishes a great deal in inducing sales," read instructions to distributors' salesmen for brake lining and speedometers made by the company. "Dressed windows, showcases, shelves and special display cases filled with bright, clean and attractive goods have an appealing value to prospective customers." Salesmen were instructed to get a 500-foot order from the dealer for Non-Burn brake lining and the company would send him a cabinet free and in addition a fine window display of posters and hangers.

The contest of the Philectric Co. has aroused considerable interest among dealers. The first prize of \$25 will be given for the most interesting letter on increasing sales; \$10 will be given writers of the three next best letters, and \$5 each for the nine next best letters. A. O. Williams, secretary of the Cleveland Automotive Association, and Leon Shipman, sales promotion agent, are judges of the letters.

One of the crackerjack salesmen of the company, Harold Phillips, offered a suggestion on how to make big money out of gasoline sales, and it was passed along to dealers as a sample of what is wanted. Phillips's idea follows:

Of all the people who pull up at the curb for gas not more than two or three out of a hundred get out of the car and visit your store. Thus you are deprived

of the opportunity of selling them profitable accessories.

Well, if they won't come into the store, bring the store out to them.

Here's the idea. Set up a board at the curb next to your gas pump. On this board each week mount a sample of some automobile accessory which you want to sell and put up an attractive show-card describing the article and quoting the price.

Don't you think you could clean up big on Non-Glare lenses handled that way during the next couple of weeks?

Demand Increases During Week in Kansas City

KANSAS CITY, Aug. 10—Sales promotion week came at a psychological time, evidently, for jobbers and retailers are reporting a distinct note of strength in the demand from the public. Members, and many non-members, of the association are pushing the project this week.

Particularly aggressive promotion of the special event was done by the Faeth company, which "went the limit" on its co-operation; and with a well planned program.

This company has salesmen in a dozen States of this territory; and a strong force in the city. The company was of course in personal touch with the city salesmen, and was able to put the spirit of the event into them directly.

To the outside sales force, a letter was sent July 21, calling attention to the program for the week, and to the article in Motor World of July 13. On July 29, another letter was sent, referring to Motor World of July 20; and making specific suggestions for increasing sales, quoting salesmen's methods of increasing the orders, suggesting defi-

nite items to push, urging salesmen to pick out items which they might push. On August 5, the letter issued by Ray W. Sherman was sent to the salesmen, for definite suggestions in the stimulation of local dealers. Some of the letters were signed by Charles E. Faeth, president of the company, and others by Gilbert E. Faeth, sales manager.

The series to salesmen was clinched Aug. 6 by a telegram to each, giving point to the salesman's purpose—suggesting that each dealer be urged to inspect brakes on every car coming into his place and sell brake lining to every owner whose car needs it.

Following is one of the personal letters sent to his salesmen by Charles E. Faeth:

To All Salesmen:

Demonstrating my considerable interest in the Automotive Sales Promotion Week, I am referring you to the Motor World issue of July 20 beginning page 8. I am assuming that a large proportion of your customers read the Motor World; therefore, they already have information in regard to this movement. If not, tell them the story.

The object of concentrating during the week of August 6 to 13 is to secure the interest of your customers—incidentally, your own. If you can arouse the interest of your customer he will buy goods of you to sell that week.

It has been suggested that one of the best means of securing results by the retail dealers is to interest them in a proposed plan in regard to which much has been said in the Motor World of paying their clerks a commission on their sales. In the absence of any concerted movement on the part of the association there is ample room for the individual initiative of each salesman.

Some of the results of what I WANT TO SELL.

One salesman writes: "After I had sold him all he needed and thought he could use I added the following items: 36 Stepcut Snap Rings, 10 Yards Americane Sheet Packing, 500 ft. J-M Brake Lining, 2500 Brake Lining Rivets.

Another salesman gives us the following list of I WANT TO SELL items in one day: 2 Icebergs, 500 Snap Rings, 112 Pairs Tire Chains, 3 Barrels Alcohol, 48 Cans Simonizer, 800 Machine Bolts, 1 Coil ½-in. Rope, 12 Rapco Jacks."

The list of another salesman reads: 50 Red Seal Dry Cells, 12 Hot Shot Batteries, 1 Iceberg, 2 Ever-Klean Seat Pads, 1 K. & S. Engine Stand, 6 Williams Foot Accelerators.

I have other lists indicating a hearty response and much enthusiasm and effort. Write items below the line every day.

You never had a better opportunity to see how much you could really sell, for there is a stream of golden wheat coming into Kansas City every day and gold dollars going back into Kansas and all of our territory.

The cloud that has been hanging over business for months in our territory has been almost entirely cleared away. Your customers not only need goods but they are ready and willing to buy them.

TO GET THIS BUSINESS NEEDS 99% HARD WORK.

CHARLES E. FAETH.

Here's another:

To All Salesmen:

Sales Promotion Week!

You will find that some people whom you try to help resent your efforts as interfering with their own business.

What is necessary then is a clear and thorough explanation of the purpose which you have in mind. One of the best explanations is a parallel case.

Not many years ago, the plumbing

A Week of Better Merchandising

REPORTS from all sections of the country indicate that jobbers and manufacturers co-operated strongly in making Sales Promotion Week, the first activity in the Automotive Equipment Association's merchandising program, a big success.

Throughout the week jobber salesmen, factory representatives and special missionary men devoted much time to educating dealers and garagemen in more effective means of selling automotive equipment. Read how some jobbers and manufacturers carried the appeal to the trade during Sales Promotion Week.

business was an entirely new industry, suffering under the same difficulties now affecting us in the accessory line. A systematic educational campaign was undertaken. Plumbing shops were moved from barns or basements, to the most prominent locations, and the proprietors of these shops were raised from hand-to-mouth mechanics, to business and merchandising men.

What can be done in one line can be done in another, and if you are thoroughly sold on this idea, you cannot tell this story without producing the desired effect.

GILBERT E. FAETH.

Twin City Jobbers Out to Make Real Merchants

ST. PAUL, Aug. 11—Efforts for Sales Promotion Week in the Twin Cities were confined by the jobbing houses to writing salesmen to confer with the trade on better merchandising in all its aspects. The salesmen continued on their routes, but did missionary work in getting dealers to clean up, keep stock moving and to study their own merchandising methods for things that might be improved and bring better results to each individual accessory merchant. The idea was to change customers from mere retailers to merchants.

Youngstown Jobbers Urge Better Selling Methods

YOUNGSTOWN, Aug. 9—Better selling methods are the means by which Youngstown automotive equipment jobbers are making Sales Promotion Week a success.

Beginning with salesmen who are taught to learn the needs of the equipment dealer, the campaign is carried to the dealer and thence down through every branch of the dealer's organization from management to janitor. Jobber salesmen who have the ability to analyze the situation of a dealer in accessories have been found especially valuable in carrying to the dealer the best methods of display and points on selling, and in instructing stock-keepers on the most advantageous ways of displaying, checking and arranging stock. The value of the appearance of a clean store has been heavily stressed.

Display advertisements have been used in bringing to the attention of the public desirable equipment, thus creating a demand for it, and this has resulted in increased business for both dealers and jobbers. Window display of seasonable equipment has aroused much interest.

Dealers and jobbers alike have benefited in Ohio to a very considerable extent by the passage of a lens law, which goes into effect within a few days. All motorists operating on the roads and streets of the State must have headlights approved by the Director of Highways. The list of headlight devices meeting approval was made public July 30. The necessity of equipping the majority of the cars registered in Ohio with appropriate devices quite naturally sent owners into accessory stores by the hundreds in search of these approved articles. Live dealers have improved the opportunity by acquainting owners with other accessories which enhance the pleasures of motoring by contributing to the convenience of the driver. Dealers have also made many friendships among prospective customers, who will visit them later when they are in the market for tires, accessories or other equipment. These are only a few of the points the jobbers have called to the attention of the dealers in supplies.

Jobbers have impressed upon dealers the desirability of having a salesman at the gasoline pump. If the automobile that stops for gasoline is not equipped with headlights approved by the Highway Director the omission is tactfully called to the owner's attention. If tires are in bad condition, if the car is starting upon a long trip, if car is not well equipped with conveniences, if bumpers, spare tires and tire covers are not included, an effort is made to interest the motorist in the desirability of this equipment.

The campaign has accomplished the object for which it was created in increasing effort all along the line for greater application of selling effort and already is beginning to show results.

Midsummer Outlook Promises General Improvement of Business

Production Schedules Revised to Meet Upward Trend of Midsummer Sales—Truck Sales Keeping Pace with General Increase of Transportation Demand

NEW YORK, Aug. 15—As the summer progresses the outlook for the automotive industry becomes increasingly encouraging. This applies not only to present but to future business. Manufacturers are not finding it necessary to curtail production schedules as sharply as had been expected and a considerable number of them have not reduced their output from the July schedules. Several companies are not able to keep pace with orders, and their dealers are considerably behind on deliveries. Where it is not possible to meet the calls of all dealers, those coming from the agricultural districts, which were flat for many months, are met first.

It has become apparent that there is no dearth of purchasing power for automobiles either in the United States or other countries. The response which followed price reductions has amazed car manufacturers. They expected some stimulus to business, but nothing like what has followed. This is the reason why some of the more popular lines are behind in deliveries. They underestimated demand.

The effect of price reductions has been equally significant in England, which was much harder hit than the United States by post-war depression. One great American company which had its English warehouses filled with cars began to liquidate its stocks as soon as the prices were cut, and so heavy has been the demand in the short period which has intervened that new shipments are actually being made.

There has been an improvement in industrial conditions in almost all countries except Russia, and they are coming back into the market for motor vehicles. That the price element is important is indicated by the fact that Germany is gaining a foothold in some of these lands with trucks and passenger cars which are under-selling those made in this and other countries where costs of manufacture are higher.

Reports from various parts of the United States are that August automobile sales promise to equal or eclipse those of July. A prediction to this effect would have been considered chimerical a month ago. Business is distinctly better in the agricultural sections and in the South. Crops are being harvested and the price of cotton has advanced. This promises well for the months to

come when the harvest is completed.

Not only are car manufacturers finding August business beyond their expectations, but there are gratifying signs of life in the truck industry. With the general improvement in business and the consequent increase in freight movements, there has been a substantial increase in truck orders, although they still are far below normal. Truck sales will move upward only as the general movement of goods expands in volume. As the need for motor transport increases, sales of new commercial vehicles probably will be retarded until the stocks of American-made trucks reimported from England and France are liquidated, but the number of such vehicles is not large enough to last long once business reaches anything like normal proportions. By that time it is probable Congressional action will have curbed reimportations.

Close observers of conditions are more firmly convinced than ever that the truck industry really is in its infancy and that its expansion in the next few years will parallel that of passenger car development in the past decade. In spite of depression, there has been a surprising development in motor freight and passenger lines. In the passenger carrying end of this business the United States is lagging far behind Europe.

With the production of motor vehicles holding up surprisingly well, parts makers are beginning to feel the reflex, and the prospect for fall business is much brighter than it was two months or even a month ago. This is especially true of makers of unit parts. Probably the most encouraging feature of the situation is that both car makers and parts manufacturers have made very heavy reductions in the enormous inventories they had on hand when the slump came last year. This will necessitate soon a larger volume of orders from the vehicle factories and will send the parts companies into the market for materials.

Another trend of the industry which is arousing much interest and speculation is the demand for inclosed bodies. Indications now are that most companies will be flooded with orders for inclosed models in the next few months. The various plants of the Fisher Body Corp. have so much inclosed body work booked that they can accept no more orders.

The Baker R & L Co. is one of those which is approaching capacity

production. On April 1, the schedule was 10 a day, in July it was 12 and now it is 15. In the past three weeks 150 men have been added to the payroll. The schedule probably will be increased to 20 a day by Sept. 1.

The Lange Body Co. states that June was the best month in its history and that business has held up very well since then. The Rubay Co. also has felt a quickening in demand in the last 30 days.

With business surprisingly good for midsummer, there is every reason to believe it will improve steadily as the year advances. Encouraging factors are coming more and more to the front. Railroad earnings are steadily climbing because of the larger freight tonnage. The crop movement at this time of the year is seasonal, but more freight cars are being used for the movement of general freight. The improvement noted in steel orders for the past three weeks is holding its own.

Harvesting is being done this year unusually early and farmers are eager to get their crops to market. The wheat harvest has stimulated business generally throughout the Kansas City district. The yield was larger than anticipated, and a big corn crop is practically assured. Wholesalers of various lines of merchandise report an increased demand, indicating that the farmers are coming into the market.

The Northwest, all the way to the Pacific Coast, has been pretty thoroughly deflated and the worst is over in that section. While business will not return to normal for several months, the trend will be gradually upward and there are signs that the turn has begun already.

A distinctly better feeling is apparent in the South, with some degree of stabilization in the cotton market. There was a sharp curtailment in cotton acreage this year and the crop is not as good as normally. It is becoming apparent that the hold-over in warehouses is not as large as has been generally believed. For these reasons cotton growers are certain to get better prices for their crop than they expected. Increased diversification of crops in the South is another favorable factor.

Altogether, the outlook for the automotive industry is growing brighter day by day. Apparently it is going to escape the worst of the usual seasonal slump.

All Ostriches Don't Wear Feathers

By NEAL G. ADAIR

"NOT bad this chowder," observed Ben Doyno, Callawassa's leading supplyman, smiling across the little table at Jack's-by-the-Lake at his old friend, Reilly, who had driven in from the gear works for their first gastronomic twosome since the Sennett distributor undertook his venture in manufacturing management.

Reilly gurgled assent.

"More like 'the kind mother used to make,'" Doyno continued. "More fish and not so many accessories as they dolled it up with when everybody wanted everything fancy that first year after the war. Reminds me of some folks' automobiles. How they did dress 'em up in those grand days, so long and yet not so long ago, when the land was flowing with milk and money!"

"Speaking of accessories and being in the accessory business," Reilly countered, "I suppose you like the readjustment period chowder better than the readjustment period car?"

"You've said a tureenful," laughed Doyno. "Some days, if it wasn't for the procession of jobber salesmen passing in and out, I'd think my place was the auditorium of the First Baptist Church on a Monday afternoon."

"Lot of salesmen on the road, eh?" queried Reilly.

"I'll say so," said Doyno. "Don't have to bother about ordering hurry-up stuff by wire or mail any more. There'll be a salesman along in five minutes or so and he'll do the work."

Reilly pondered a moment. "See all these fellows, do you?"

"Most of 'em. But they don't get time to warm our chairs much. It's in again, out again in quick order."

"H'm, what's selling best this summer?" Reilly asked.

"Nothing—nothing in accessories, I mean," answered the supplyman. "Our customers buy the things they have to have to keep going and that's about all."

"But there must be some leader or leaders in your line," commented Reilly. "Think a minute. In out and out accessories what's your big seller?"

"Haven't any big seller—no such thing, I tell you," Doyno came back with a bit of warmth.

"And these jobber salesmen," Reilly interrogated, "haven't some of them, at least one of them, showed you something new or commanding that would give you a talking point for your store and get folks coming in, for that and other things?"

"Salesmen—bah!" snorted Doyno, and

with an attempt to dismiss the subject: "I really think this chicken was hatched in the Harding administration, what say?"

But Reilly was not going to spend the afternoon discussing as well as eating a country dinner.

"Ben," he said, "you've got the wrong slant on these salesmen and every time you rush a good one out—I'm not saying they're all good but some of them are—you are kicking some of your own profits out the back door. A lot of these men have ideas, not merely goods to sell but ideas to pass on to the men who buy goods from them. And a whole lot more of them have information that belongs to you, if you would only give them a chance to give it to you, about new lines or improved lines of accessories and methods of selling them that would give you something to advertise and talk to your customers about and get something moving besides nuts and bolts and cotter pins. The older I get the more firmly am I convinced that not all the ostriches wear feathers."

"Ostriches? What's the squawk? How come, how come?" said Doyno, wondering what was coming but knowing that whatever it was he would have to sit and take it.

"Yes sir, ostriches," repeated Reilly. "Just because some jobber salesmen can't think of anything better to do than pull out an order book and ask, 'Whaddayaneed to-day?' you put 'em all in the same class and stick your head in a sandhole every time you see one coming. You won't look or listen. Confound you, I've a good mind to let you ruin your eyes and ears along with your common sense, if you ever had any."

"Here now Reilly—," Doyno broke in.

"Never mind," Reilly retorted, knowing just how much punishment his old friend would stand. "I've roasted geese in my day, and they didn't wear feathers either, and don't you say a word until I get this ostrich done to a turn."

"You've been in the business too long to say every jobber salesman is just a jobber salesman and let it go at that. Before you let this buyers' strike thing get on your back you got a lot of good suggestions from those chaps and you know it. There's a garageman a couple of blocks from the gear works who has



made \$300 this last year on a certain grease gun alone, to say nothing of the other trade brought in by this specialty, which he advertised as a specialty and pushed hard. And he had never heard of this particular grease gun until a jobber salesman got his interest one day, told him how simply it worked and how cheaply it sold and how it offered the retailer almost 50 per cent profit. There are a lot of things like that. Every week some genius brings out something for the automotive industry that is good, that all but sells itself and that gives the dealer a cracking good profit. But a lot of dealers like you won't give the jobber salesman a chance to help you make some money.

"Ben, there are some salesmen you shouldn't waste any time with—or the jobbers who send them out. The salesmen are just order-pad toters and their bosses have a jellyfish policy or don't carry ready stocks or something. You know them—or you ought to. But when a good house sends out a good salesman they are trying not only to make a profit for the salesman and themselves, but for the dealers in their territory, because the dealers' prosperity is theirs.

"If people won't come in and buy—and it will be a long time before they do that as they used to—get something to bring them in. And if you don't know of anything to bring them in maybe—and a couple of maybes—some tootin', hootin' salesman does."

"Cornelius," said Doyno—the Sennett distributor's first name was such a mouthful that even his close friends used it only on special occasions, "I've forgotten—what's the name of the other long-necked dingus in the circus, not the one with wings, but an oversupply of legs?"

"Giraffe?"

"That's it—and that's me," said Doyno as he paddled in the finger bowl. "They surround that poor critter with all kinds of adverse conditions—floor too high, roof too low, walls too near and everything, but he sticks his head out through the hole at the top of his cage and knows what's going on just the same."



Dollar Ideas

Earn a Dollar

MOTOR WORLD will pay \$1 each for ideas for this department. The ideas should have to do with sales and business management. The idea should be in two parts:

- 1—The problem.
- 2—The solution.

But if you'll get the idea on paper in any fashion whatsoever, we shall be glad to shape it up for you. Do two things:

- 1—Help some other man.
- 2—Make a dollar for yourself.

Old Model Car Used Builds Public Confidence

STRONG MOTORS, INC., Chandler distributor for central, western and southern New York, with headquarters at Rochester, is using an old Chandler car to build public confidence in their products. "Old No. 3" is bearing the latest advertising plan. It is the third Chandler 6 built and the second Chandler to be released by the Chandler Motor Car Co. The first car was kept by the factory, the second went to Boston and the old No. 3 was allotted to Rochester. When a ruling of the show committee kept the old veteran out of the show by providing that only the latest types of cars could be displayed, Strong Motors, which had dressed the car in gorgeous dress of yellow and black, paraded it up and down the street every morning and parked it in front of the exposition building. Wherever old No. 3 happened to be, it attracted attention. The striking color and ancient body design and banner bearing the words "Old No. 3" brought comments from everyone. The car was boosted strongly in newspaper

advertising and was made the topic of several advertisements which told about "The Life of a Chandler." The campaign worked out successfully, not only in Rochester, but in Elmira, Binghamton, Syracuse and other cities. Ever since the show there was a strong call for the car from dealers in many other towns, and arrangements were made to have it stay in service throughout the spring selling season. "Old No. 3 Week" was inaugurated in many places where the Chandler 6 is represented. The arrival of the car in each town was preceded with publicity campaigns and newspaper stories telling the history of the car.

This Sign Helped Keep Things Moving

"**EVERY** 8 minutes a customer stopped last month" is the wording of a 16 x 30 in. sign on the door of a Cleveland gasoline station. The space for the numeral is not printed, so the figure may be erased and a new lower one chalked or pasted in as business grows. It serves both as an advertise-

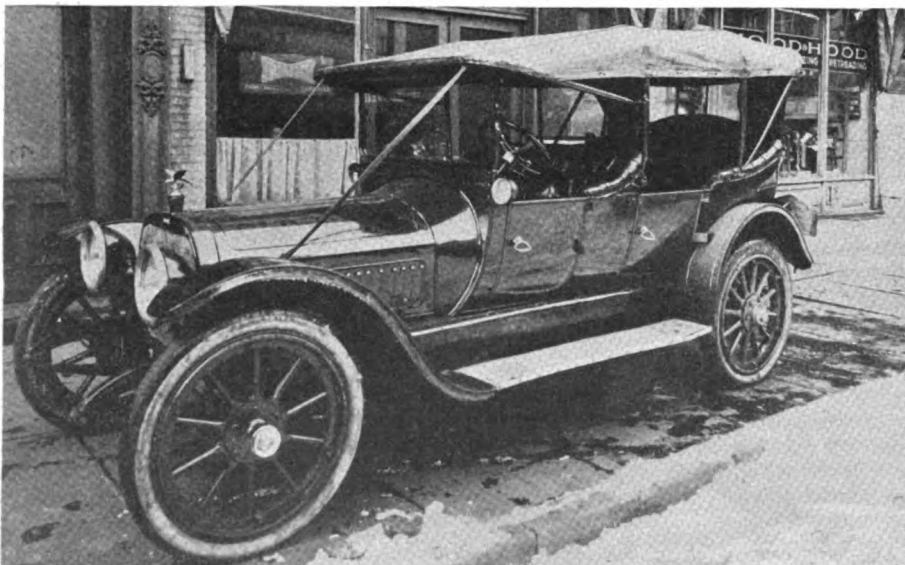
ment for the popularity of the station and a gentle reminder that patrons should not block the way by working on their cars or lingering at free air and water lines. This sign has helped keep things moving on a "time is worth money" basis, according to E. J. Biddle, proprietor.

Baseball Scores Help Swell Gasoline Sales

MANAGER FRANK BURROWS, of "The Pep Pits" repair shop, Cleveland, has a plan to get more of the streams of passing cars to stop at his shop for inspection and service, or at least oil and gas. A baseball scoreboard is maintained every day on the street window of the shop through service from a downtown sporting club having leased wire direct from the parks. This service is not expensive. The curb gas pump attendant phones each 15 minutes for the results by innings. The phone is within sight of the pump, so no customers are overlooked. The painting of the figures and batteries on the glass takes but a few seconds and about 35 cents worth of paint a week. Immediately after the plan was inaugurated it was apparent that many motorists memorized the location and at least slowed down or stopped to read the score. At least 20 per cent more gas sales are made between 3 and 5 p. m., and often a polite inquiry as to "how she is hitting" leads to a repair job among these "fan" customers. The plan should work in any large city where baseball interest is high, provided there is reasonably heavy traffic to attract.

Systematic Sales Effort on Doctors Pays

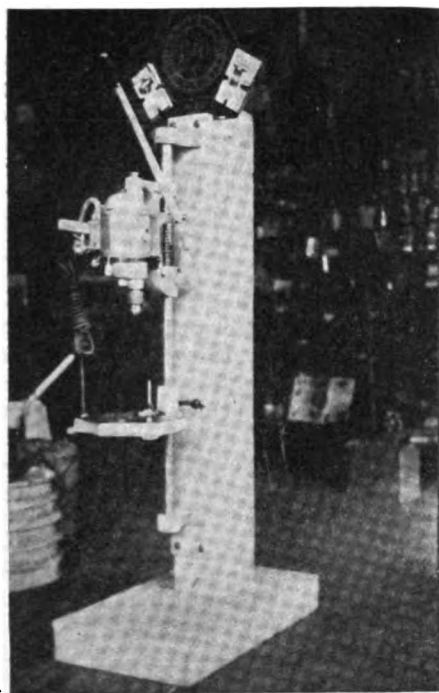
AMONG the most consistent users of cars are doctors, and because of the fact that they do use cars so constantly the doctors are also always buying cars. So the alert dealer who keeps soliciting the doctors regularly is pretty sure to make sales to some of the local doctors each year. This being the case the wise dealer will send the doctors of the city



Old Chandler car that is building public confidence

A regular sales letter every so often and will follow this up by a personal call every now and then. Of course all the dealers in the city are also after the doctors' business, but most dealers do such soliciting spasmodically and the dealer who goes after the business on a regular methodical plan will get the cream of the business. Start now to put system into your soliciting of the local doctors.

Displaying Equipment in the Salesroom



Effective and interesting display of automotive equipments inside the jobbers' and retailers' store as well as in the windows is moving much stock in the establishment of aggressive dealers this summer. Very often supplying an attractive background for some item of merchandise increases sales many times. A good example of this activity was demonstrated recently in the Chicago Automobile Supply House. This store had no available place on which to display a post drill. The post drill stand in the picture was painted white and placed in a conspicuous position.

Driver's License with First Car

A WOLVERINE car distributor has gone a step farther in the matter of service. In his advertising he guarantees a driver's license to any customer buying his first car. Five or six lessons in driving are usually sufficient and give excellent opportunity for the car salesman to become personally acquainted with the customer, to give him proper instruction in operating the new car, etc.

Occasionally, prospective buyers are also given demonstrations on these drives of instruction. The man who has just purchased and is learning to drive, is generally so enthusiastic that it becomes contagious and helps the next sale.

After sufficient instruction the salesman endorses the customer's application for a license, testifies before the chief

of police as to his proficiency, and the new customer has been made a firm friend of the distributing company.

Meeting the Prospects' Price Talk

THE Beacon Motor Co., Peerless distributor in Boston, has worked out an interesting method of handling the price talks of prospects. The company has printed on a card in bold face type a list of cars, the Peerless class, and has quoted the prices of those cars and the Peerless. When the prospect starts talking to the salesman about lower prices, about the Peerless being too high priced the salesman just leads him to the back of the salesroom and calls his attention to the information contained on the card. The Beacon officials report that the plan has effectually cut the effect of price talk as a sales resistance factor.

This Helped a Dealer Sell Used Cars

AN Indiana used car dealer has a frame which looks much like the frames seen in lobbies of motion picture theatres in which the theatres show the "still" pictures of the film. The dealer places this frame in a prominent position in his display window and in the spaces in the frame puts pictures of used cars or cards attractively advertising the cars. He varies the cards and pictures almost daily, thus giving a constant freshness and variety to the frame. That the stunt is very effective can be seen readily. At almost any time of the

day there is someone standing in front of the window and looking at the frame.

An Idea That Pleased Many Motorists

SUPPLYING bolts complimentary for attaching license tags to automobiles has proved a profitable advertising venture for the E. P. Jaul Tire & Accessory Co., in Columbus, Ohio. This dealer bought a lot of one and one-half inch bolts and put them up in packages of four containing nuts and lock washers. The envelopes containing them carry the name of the donor and a short notice saying that they were given complimentary by this concern. Permission was obtained to give one of these packages to each person who bought a license. They were distributed from the Columbus Automobile Club.

Selling the Car to Women

ARE there more women driving the cars you handle than are driving other makes of cars in your city or county?

If there are—and you can easily ascertain the exact situation in this respect—you have a splendid topic for publicity and advertising purposes.

Or if only an average number of women are driving the cars you handle you can, nevertheless, make much of this fact in selling cars to men who want their wives and families to use the machines while the men of the household are at work.

Don't neglect this form of boosting for your business.

Introducing a New Car



When the Marsh-Strickle Co. of this city took the distributing agency for Sheridan cars in Spokane and territory the firm cast about for some plan which would supplement its ordinary advertising to secure favorable publicity for the new venture. The one that was ultimately adopted and put into effect is depicted in the accompanying photograph. A highly polished specimen of the new car was mounted on a truck and was driven through the principal business streets for several days. A most satisfactory number of inquiries were secured and a strong prospect list was built up. Care was taken to see that the car did not proceed rapidly, so that persons on the streets were able to secure a good general idea of the type and finish of the car. After the demonstration in Spokane the display was sent out into the surrounding territory and the results were quite comparable to those secured in the city.

Editorial Observation

Another Fight Is On

A NATION-WIDE propaganda campaign in opposition to the widespread use of motor trucks is being conducted by the American Electric Railway Association. The slogan of the campaign is: "Use the Trolleys—Save the Highways."

The chief argument advanced against trucks is that they wear out the highways and do not pay a fair proportion of taxes. The campaign is being conducted by a committee of 100, representing traction companies in all parts of the country. This committee, acting through local electric railway companies, supplies the newspapers with "canned" editorials and other material which purports to show why the trolley companies are not being treated fairly because they are compelled to pay taxes, and the motor bus freight and passenger car companies have no obligations of this character beyond their license fee.

The arguments are decidedly open to attack by the automotive industry. The historic fact that traction companies almost always are far in arrears in their municipal taxes naturally is not mentioned.

The efforts of this committee probably are responsible for the vigorous efforts which are being made in many sections of the country, particularly in Connecticut, to curb the operations of motor bus lines, which have cut deeply into the profits of street car companies by offering lower rates of fare as well as more convenient and efficient service.

The Connecticut Co., which has a virtual monopoly of the traction lines in the State of Connecticut, is held responsible for the enactment of legislation which would prevent competition by buses paralleling street car lines. This legislation has been nullified up to the present by injunction proceedings, and the court calendars are clogged with test cases instituted by operators of motor buses who have been arrested for violation of the statute. The Connecticut Co. is \$1,800,000 in arrears in its State taxes.

A similar campaign against the use of motor trucks and tractors has been instituted by the Horse Association of America, which contends that farm work, as well as the hauling of merchandise, can be done more economically and expeditiously by the use of horses. In this case also the figures and statistics supplied are also susceptible to effective contradiction.

What's Ahead

A UTOMOTIVE men who have their ears to the ground are not counting upon the turn of public sentiment from vacationing to work at Labor Day time to restore normally prosperous conditions in all branches of the industry. They realize that renewed buying interest which may be shown with the approach of fall will not be sufficient in itself to put business back on a normal basis. The same planning and work which has been necessary to assure profits since the readjustment set in more than

a year ago will be necessary throughout the fall and winter and most likely well into next year.

There are indications that a probable material strengthening of the buying power and inclination of the agricultural sections of the country with the arrival of fall may be offset by decreased buying ability in the industrial sections, due to the fact that most of the spending money piled up before present conditions set in will have been dissipated. Fall conditions naturally will be better than those of the midsummer stagnation period in an average community, but no one need look for any wonderful revival coincident with the reaping of the harvests. The country's progress back to fully stabilized conditions is bound to be slow, but there is every indication that it will be steady, and men who manage their businesses to meet such a state of affairs will be rewarded by at least good business during the continuance of the readjustment process and will be ready for big business when the country gets under way again in the generally predicted long period of prosperity and sound conditions which lies ahead.

Automotive business men who have a little spare time on their hands in these weeks preceding the naturally busier season beginning about the middle of September would do well to go over the details of their organizations, eliminate waste if there is any, strengthen the weak points in administration and working details and set themselves for the fall and winter pull.

The Canadian Show

THE eyes of the automotive industry have turned toward Canada for the annual automotive show which will be held this month in connection with the Canadian National Exposition. The automotive display, as in past years, will include exhibitions of passenger cars, trucks, tractors, motorcycles, motor boats and various types of automotive equipment. It will be truly a national show, presenting to the public the products of the industry manufactured in Canada, and also those of American and European manufacture distributed by Canadian merchants.

This holding of the automotive show as a part of the national exposition is a great thing for the industry in Canada. It makes possible exhibition of automotive products before crowds many times greater than could be brought together for an exposition devoted to any one industry, and it makes this possible at much less expense in promotion and preparation than would be entailed in a lone exposition. All Canada largely attends the exposition, which devotes itself to exploitation of the industrial, agricultural, mercantile, mining, forestry and fishery industries of the dominion. It is a great national event, and this year as in the past automotive men are looking to it to bring about stimulation on a large scale of public interest and purchasing.

Some American cities take advantage of State fairs and similar events to stage fall automobile shows. The experience of these cities and of Canada indicates that wherever possible even wider use might be made of such opportunities.

LETTERS *from* READERS

Concerning the Parts Question

Editor, Motor World: As a car dealer, handling one of the popular low-priced cars abroad, perhaps some of your readers may be interested in my views concerning the controversy now going on between the vehicle makers and the parts makers over the latter desiring to sell directly to the trade and perhaps to the car owner. While my own service station has greatly assisted the sale of my car, I may say that I have found it interesting in another respect. As my car sales ran up to 400 during 1920, thus enabling me to order renewal parts in considerable quantities, I have learned a few things in the past five years about making this department of my business both satisfactory to my customers and profitable to myself.

While the car maker's primal interest is in the designing, making, assembling and sale of his particular car, he is, nevertheless, under obligation to get out a parts catalog and supply his renewal parts, and particularly his exclusive design and dimension parts, which are obtainable nowhere else. Undoubtedly there are car makers who would prefer to get out of the parts business, or at least be relieved from it so far as they can, without handicapping the sale and operation of their cars. There are other car makers who do not wish to get out of the parts business; some of whom find it profitable and others who insist that their cars shall always be supplied with renewal parts made from superior material and well machined.

I do not believe that all car makers view this parts business in the same light. Let us consider where their interests may differ. We have the group of our highest priced car makers who endeavor to machine most all of their parts, but whose cars are not running in sufficient numbers to particularly interest the parts makers.

At the other end of the price line we have the popular lowest priced cars, whose makers have already lost control of their parts market. The former will continue to supply their parts, while the latter are probably praying that Tom, Dick and Harry make the renewal parts for these cars of good material, machine them well and stamp their name on their product. Both of these groups appear to me to be out of this controversy.

We now come to the makers of the intermediate price cars, who are numerous and who, I think, should properly be divided into two classes: one buying all their parts and the other manufacturing a great many, if not all, of their parts.

Many of the former class, whose cars have a large sale, conduct a properly

managed parts department from which they derive a handsome profit, while others in this class, whose cars do not have a large sale, are indifferent to this department and regard it more or less as a burden.

Many of the latter class, who make their parts, very properly regard this department as a legitimate part of their business, both from the profit derived

If I Were Selling Motor Cars

If I were selling motor cars,
I'd place my product in the stars
As well befits a thing so rare,
And strive to do it justice there.
I'd sell myself on every point
From lamps to universal joint,
And to the house that fashioned it
I'd swear allegiance, infinite.

And then I think I'd tell the truth
In selling either age or youth,
For honesty befriends a man;
Deceit is just a boomerang
That, rushing blindly into air,
Returns to find the sender there,
And brands him as a treachery
From whom all decent men should flee.

I'd vision for my customer
The benefits he could confer
Upon himself and family,
And all the pleasures that might be.
Then would I show him how and why
These things would happen if he'd buy
The product that I called a star.
(The idea first, and then the car.)

I am not selling, understand,
Another business ties my hand,
But if I were, I'm telling you
That this is just what I would do;
For it was only yesterday
A man approached me in this way
And showed me most conclusively
His was the car just meant for me!

—M. S. Charlton.

and from the satisfaction of supplying their car owners with "home-made" renewal parts.

Now that the use of cars and trucks has become so general, the supplying of their necessities has become a common feat of merchandising, as is clearly illustrated by mail-order houses, department stores and general hardware stores stocking renewal parts for popular cars. It does seem to me that those car makers who buy all their renewal parts might do well to forego their parts profits and do what they can to make the sale of their renewal parts open and general. Car dealers know all about this feature, that their customers would greatly appreciate anything which the car maker can do in the way of making renewal parts more quickly obtainable to enable

him to operate his car with the least possible bother and expense. One particularly objects to the car maker endeavoring to keep the sale of his renewal parts exclusive, so as to make a thundering good profit on them to pay him for his fuss and bother in maintaining a parts department.

I believe that a solution of this controversy may perhaps be brought about by the parts makers inviting those car makers who manufacture their renewal parts to join with them in the general, open distribution of parts, stocking and selling those parts exactly as they handle the sale of their own parts. These car makers who make their own parts clearly have a right in defending this part of their business and, while their prices will generally rule much higher, there are many car owners who undoubtedly prefer "home-made" renewal parts. This arrangement would give the car owner, the garageman and the service station of the car dealer the option of buying those parts wherever he could get them the quickest and the cheapest, and would tend to work toward making his car popular.

Undoubtedly the parts makers can now truthfully argue that the present method of obtaining renewal parts brings a burden on the car owner, in drawing his parts in the usual round-about way, with the consequent expense of unnecessary handlings and intermediate profits.

I would like to see the parts makers organize and incorporate a distributing company, locating branches in the large centers and stock renewal parts of every make of car that ran in sufficient numbers to warrant. I think they should catalog a list price for the car owner (general public), with a suitable discount for the garage or repair man and a suitable discount for the car dealer who operates a service station, to whom they should supply parts at a reasonable advance over the price at which they are supplying the car maker. This would cut out all unnecessary handlings, delays and intermediate profits, make an open market for the car owner's benefit and at the same time would create no monopoly, as any buyer, through the car dealer, can always obtain renewals from the car maker should he choose to do so.

Furthermore, I suggest the parts makers stocking their branches with all nuts and bolts, capscrews, washers, cotter pins, machine screws and stove bolts and all standard material which can be sold in original packages. This is to assist in obtaining close touch with the general repair trade, and, I believe, to the advantage of all concerned.

W. L. WADLEIGH,
Montclair, N. J.

A Department of
BETTER MECHANICS

Conducted by J. HOWARD PILE

No. 204

When asking for information, please state whether you maintain a permanent file of Motor World, as many inquiries are answered by reference to previous issues

Cylinder Lapping Machine Saves Time and Labor

Development of Device to Lap In Scored and Worn Cylinders Results in Vast Saving in Time and Makes Possible a More Perfect Job with Practically No Manual Labor

THE practice of lapping cylinders is not a new one. Almost since gasoline engines were first used, the lapping process has been utilized not only in repairing and overhauling but sometimes in the original assembly. Heretofore the work has been carried out almost entirely by hand labor and the job done in this way is a heart and back breaker for the strongest man and there is probably no job more hated around a shop than lapping.

Using hand methods, a good mechanic can get an average job through in a

day. If the cylinders are in pretty bad condition it may take much longer than this and if the cylinders need only a few touches it may take considerably less time than this.

Every mechanic and every shop manager has a different idea of how a job of lapping should be done and the proper kind of tool to do it with. There have been hundreds of lapping tools devised, but most of them consist of an old piston slit in two lengthwise and the two parts forced outward against the cylinder walls by a spring.

Using a Drill Press

About the only improvement in this method in a good many years has been the operation of the lap by a drill press, the mechanic moving the spindle slowly up and down. This has eliminated the hardest part of the manual labor, yet the mechanic has to constantly move this lever. The greatest disadvantage in this kind of a device is the obvious impossibility of getting the cylinder bore perfectly true and of the same diameter at all points. All the time the lap is revolving in the cylinder it is cutting. Therefore if the lap is held at some certain elevation longer than at other points, that particular part of the cylinder is bound to grind out larger than the other parts. It is natural for the mechanic to slow down a little as the lap nears the top or bottom of the stroke and it has been found that in using the drill press in lapping operations the upper and lower portions of the bore are ground out larger than the center.

The proper motion for a lap is a spiral twist going down and a straight return. This involves moving the lap around a part of a circle on each stroke and this motion has only been attainable by hand. This kind of a stroke, run the full length of the cylinder bore, will result in a perfectly true cylinder as far as roundness is concerned. Of course it cannot give good results if the cylinder has been bored or ground so that it is not at right angles to the crankshaft.

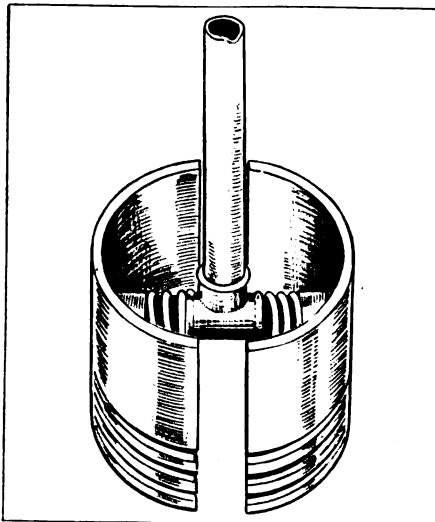


Fig. 1—A two piece lap which is used either with the hand lap or machine lap

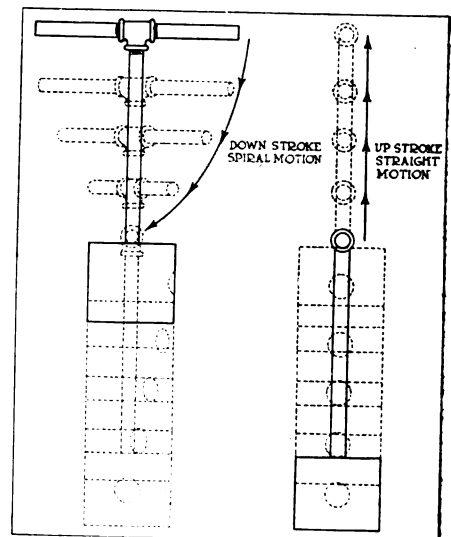


Fig. 2—A diagram to show the course taken by the lap. It is spiral going down and straight coming back

A machine which duplicates exactly the correct hand motion has been developed by William McIlvrid, service manager of the Bliss-Stratton Co., New York distributor for the Dodge. More than a year ago McIlvrid rigged up a small device operated by an eccentric from one of the overhead shafts. This device lapped out one cylinder at a time and was so constructed that on the downward stroke the lapper was given a spiral motion and on the up stroke it returned through this same track. The result was that the cylinder bore was rifled and the design was therefore changed so that while the down stroke retained the spiral motion, the up stroke was straight. This was accomplished by cutting a number of teeth on the top of the sleeve which operates in the upper cylinder. A pawl drops over these teeth and allows the cylinder to turn on the down stroke due to the spiral slot in which the pin works and the friction of the cylinder against its container. On the up stroke, the pawl engages the teeth and prevents the cylinder from turning so that it overcomes the friction and pulls straight up. In order that the same point may never be reached in any amount of turning, there is an odd number of teeth, the number used in this case being 49.

This device gave perfect satisfaction and removed completely the hard manual work in connection with lapping. There still remained, however, the disadvantages that the machine had to be set four times and there was the possibility that the lapping might be continued considerably longer in one of the cylinders than the others which would naturally result in that cylinder being larger than the others.

A Four-Cylinder Model

The final development of the machine was to build four of the machines into one unit, having them machined so that the center distances will all be the correct distances apart. This machine is shown in the illustration, Fig. 3.

The base casting is made so that the drilled holes fit over the studs of the cylinder. In order to eliminate the necessity of removing the studs with the ever present possibility of breakage, there are spacers which fit right over the studs so that the nuts can hold the device down right on these studs. The cylinder block can be either clamped down to a stand underneath the machine or the work can be done with the engine right in the car, the car being run underneath. Slip joints on the top connecting rods allow for a variation of several inches.

The eccentrics which impart the up and down motion are on a shaft overhead and are so keyed that each lapping piston is at a different point in its travel at any instant. This prevents any strain or heavy reciprocating reaction which would be present if all the pistons went down at once.

The lower ends of the long rods have universal joints so that it is not necessary to accurately line up the job under the shafting. The teeth are cut in the

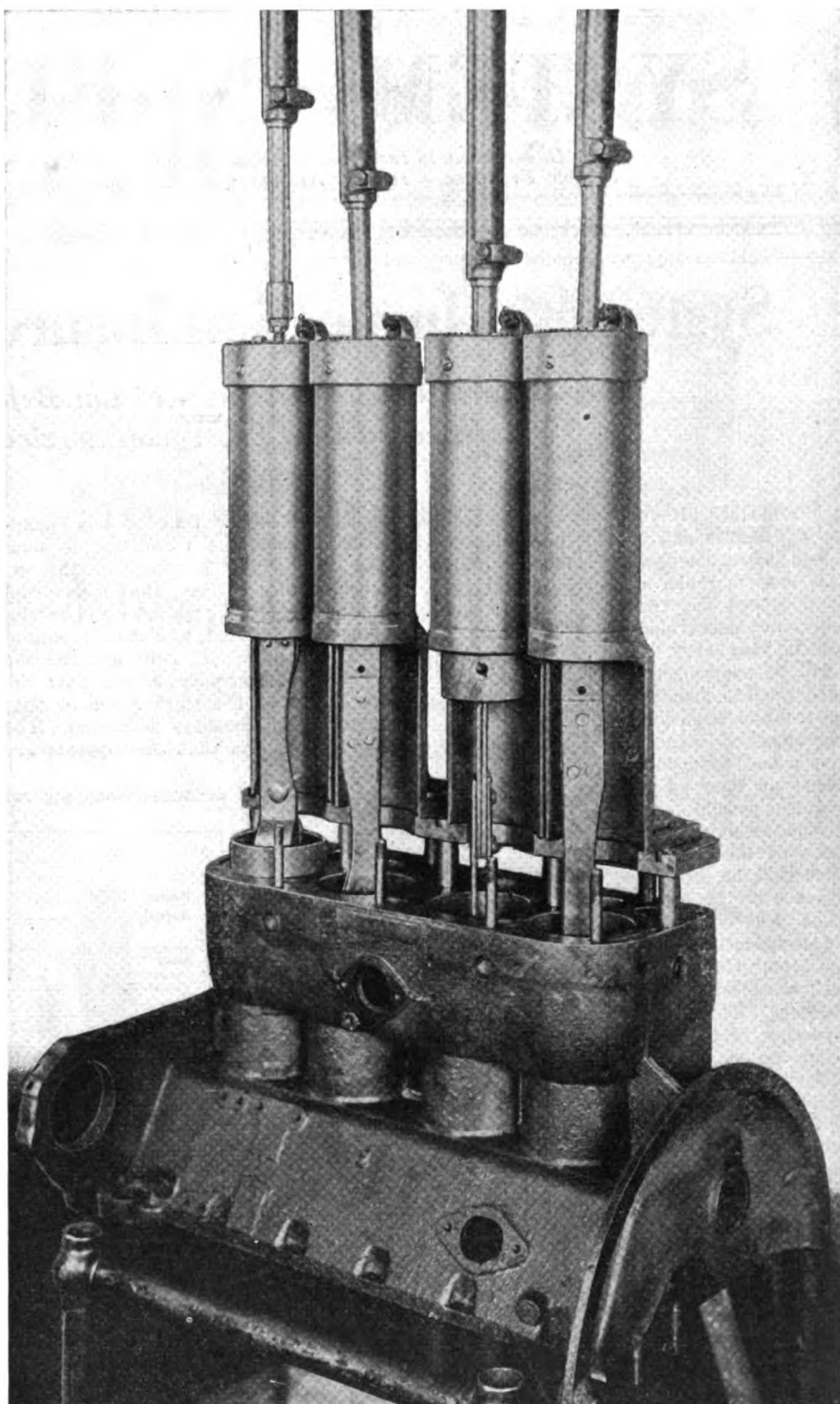


Fig. 3—The four-cylinder power-operated lap which laps in the four cylinders in a couple of hours against an 8 or 10-hour job by hand

upper part of the inner cylinder and these and the pawls can be seen at the top of the device.

The split pistons are of the type ordinarily used in hand lapping and are held apart by spring action which is adjustable by means of thumb nuts.

With the device, the time of lapping has been reduced from an average of 8 or 10 hours to about 2 hours and it is possible for one man to attend to the lapping job and go on with some other work while the machine is working.

A number of tests with multiplying gages shows that the cylinder bores are perfectly true at the end of the operation as to roundness and parallelism.

A device such as this can be constructed in any good sized shop. It cannot be adapted to fit a number of different size engines although it is possible that the design might be altered to lend itself to this improvement. The particular machine shown has lapped out well over a thousand blocks and has not given any dissatisfaction in any case.

Repairshop Shortcuts

No. 3013—Front Wheel Bearing Lubricator for Fords.—Lubrication of the bearings on Ford front wheels is easily accomplished by fitting the hub caps with cup attachments which will fit one of the patent chassis lubrication grease guns.—John W. Ferguson, Fourth Street Garage, Roanoke, Va.

No. 3014—Teeth Keep Screwdriver from Slipping.—Teeth cut in the sides of a screwdriver blade keep it from slipping out sideways. The blade is softened and the teeth cut with a cold chisel, after which the blade is hardened and tempered.—John W. Ferguson, Fourth Street Garage, Roanoke, Va.

No. 3015—Clevis Pin Puller.—A piece of round stock flattened out at one end and with a notch cut in the flat makes a good puller for clevis pins, bolts, etc. It can be pounded with a hammer, as shown.—Herbert Mooney, Worcester, N. Y.

No. 3016—Handy Place for Lamp Chamois.—An old chamois fastened beneath the lamp bulb rack enables mechanics and others to wipe finger marks from bulbs before installing them in the car. It also reduces breakage from dropping bulbs on the floor.—Donald McLean, Cleveland.

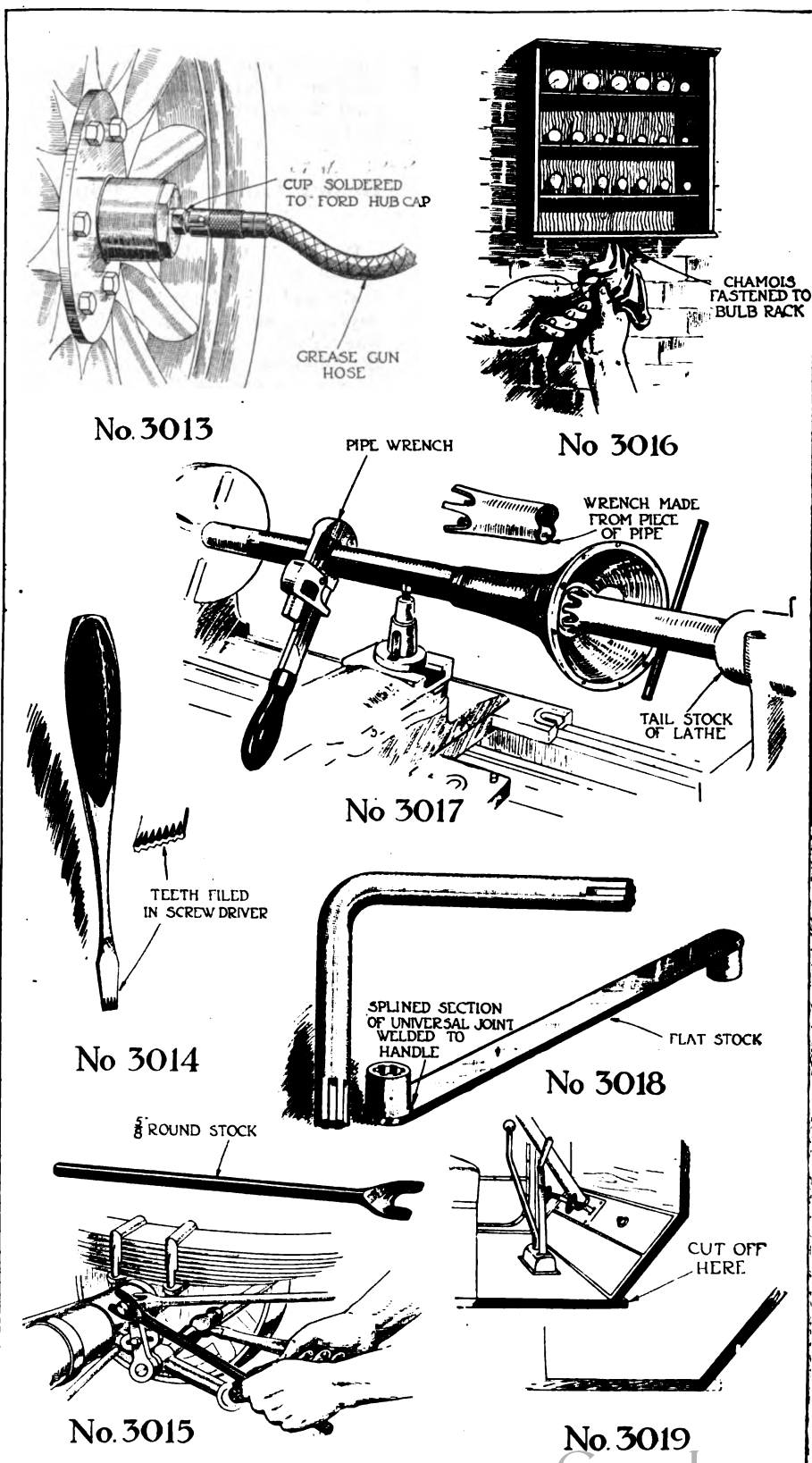
No. 3017—Rear Axle Adjusting Nut Operations on Dodge.—Dodge drive shaft adjusting nuts are removed, replaced and adjusted by placing the drive shaft in a large lathe with the front against the face plate and the rear against the tail stock. The housing is held with a large pipe wrench and the nut turned with a tool made from a piece of tubing.—C. R. Pierson, Central Garage, Medina, N. Y.

No. 3018—Universal Testing Wrench for Chevrolets.—For testing the condition of the universal without removing the ball and cup end of the torque rod, a wrench made from sections of FB and 490 axle shafts welded at right angles, and for testing drive shaft at the splined end, sections of universal yoke are welded to a handle.—Charles R. Simmons, Chevrolet Motor Co., New York City.

No. 3019—Oil Stopper.—To prevent oil working back under the mat in the driver's compartment, the floor board is trimmed off to the same angle with the heel boards.—Herbert Mooney, Worcester, N. Y.

MAKE A DOLLAR

SEND in a sketch and a description of the device you doped out to make your work easier. Motor World will pay a dollar for every idea accepted for publication.



THE LAW

By GEORGE F. KAISER

Perplexed?

Does some point of law perplex you?
Why don't you ask MOTOR WORLD'S legal editor to discuss the question?

Unreasonable Delay Voids Liens, Colorado Court Holds

The Supreme Court of Colorado recently decided that when repairmen unreasonably delay repairing an automobile, which has been left with them for repairs, they have no lien and no right of possession, and so the owner is entitled to recover the car if he so desires.

Suit was brought to replevin an electric automobile by an owner against a repairman. It appeared that in August, 1917, the owner had delivered the car to the repairman to have certain repairs made.

The car remained with the repairman from August to the following January—the repairs were never made and the car was damaged while in the care of the repairman. The owner first offered to pay \$80 to get the car and then offered to pay \$100, but the repairman refused to deliver the car to him.

The owner proved upon the trial that the repairman refused to let him test the car; that he had agreed to make it run 45 miles on a charge, and that when he replevined it it had to be towed. The court thereupon decided that under the circumstances the repairman was not entitled to any lien and the owner was entitled to possession of it.—Huffaker vs. Auert, 197 Pac. pg. 897.

Owner Liable for Repairs

That the owner of an automobile who delivered it to a repairman without any agreement as to the price to be charged for the work is liable for automobile repairs costing more than the price of the car, is the decision of the Supreme Court of Massachusetts, in a late case.

It appeared that the owner had visited the garage at various times while the work was being done, was consulted as to the extent of the repairs and knew what was being done.

The court held that he was therefor liable for the reasonable value of the repairs even though they might amount to more than the cost of the car.—Horton vs. Phillips, 131 N. E., 324.

Lender's Interest Protected

That one lending money on the security of a mortgage on an automobile which the mortgagor purchased with a fraudulent check is a purchaser in good faith, and will not be required to give up his security but will be protected against the seller's claims when he had no knowledge of the fraud was the deci-

sion of the Appellate Court of Indiana in the case of Patterson vs. Indiana Investment & Securities Co., 131 N. E. Rep., pg. 19.

Dealer Can Insist Upon Carrying Out Contract

Editor Motor World: A customer agreed to buy an automobile from a dealer and signed a note for the deferred payments, agreeing at the time the note was signed to make the cash payment on the following day.

In the meantime, the customer wished to cancel the order, and did so on the following day.

Can the dealer force the customer to take delivery of the car and to pay the amount as agreed verbally, or can he collect any damages from the customer for not fulfilling his verbal agreement?—M. P. Co., Oregon City, Ore.

Answer—You may not be able to force the customer to accept the car, but you can insist that he perform his part of the contract or pay damages. Tender the car to him and if he refuses to accept it and pay as agreed, retain a lawyer in your city to sue him.

A Michigan Insurance Decision

That where a person selling a car under a conditional bill of sale insured the same for himself and the buyer, the latter's interest was void when he subsequently procured another policy in a different company on his own interest, without the permission of the first company, was the decision of the Supreme Court of Michigan in the case of Baker vs. Northern Assurance Co., 183 N. W. Rep. pg. 61.

Garageman Should Sue

Editor Motor World: We would be pleased to have you advise us whether there is a law in Pennsylvania which grants a garageman the power to lien an automobile on which the owner is slow in paying repair bill. If there is we would be pleased to have you advise us the number and date of the law by mail.—K. Bros., Perkaspie, Pa.

Answer—All that you have in Pennsylvania, so far as I know, is a so-called common law lien, which merely gives you the right to hold a car until your bill is paid. Of course, if you have given up the car you have lost whatever right to a lien you possessed. You can still sue for the amount due you, however, and that is what I advise you to do now.

Owner in Jail, Garageman Seeks Payment

Editor Motor World: On Oct. 13, 1920, we were called upon to tow in and repair a Ford car which had collided with another car. Both men agreed to pay their own repairs. Car owner No. 1 (which we also brought in and repaired) paid for his repairs and took his car.

Car owner No. 2 was arrested and imprisoned for a term the length of which we have so far been unable to ascertain. This took place before the car was finished and for some reason other than the accident.

The car being finished and uncalled for, we placed it on our storage list at \$5 a month rent. The repairs amounted to \$87.11. Storage from Oct. 13 to date amounts to \$45. Total bill to date amounts to \$132.

Must we await the termination of his sentence or is there some other way to collect the amount due us on this bill.—Garage, Port Carbon, Pa.

Answer: As I understand it, in your State a mechanic has a lien on property he repairs and can hold it until his bill is paid. I see no reason why you should have to wait until your customer gets out of jail to collect from him.

If he pays no attention to your demands for payment put the claim in the hands of local attorneys for suit.

An Arkansas Ruling

That where an automobile is sold f.o.b. the city of purchase, and there was an understanding between the buyer and the seller that if the factory increased its price, the buyer would pay the difference, the buyer was not liable for the cost of bringing the car from the factory to the city of purchase.

The Supreme Court of Arkansas in reaching the above decision held that the agreement only referred to the factory price of the car and not to freight, etc.—Berger vs. Jonesboro Motor Co., 231 S. W. Rep., pg. 4.

Owner Not Responsible

The Supreme Court of Louisiana, in the case of Atkins vs. Points recently decided that in Louisiana where the owner of a car rents it to a chauffeur who pays a stipulated sum per day, he is not responsible for injuries to third persons caused by the chauffeur's negligence, as there is no relation of master and servant between them.—88 So. Rep., 381.

SCIENTIFIC CONSTRUCTION

GARAGES

SHOWROOMS

REPAIRSHOPS

Conducted by DONALD D. BLANCHARD

Put an Accessory Store in Your Garage

The Garageman Has an Opportunity to Cash in on His Intimate Contact with His Customers

MOTOR WORLD is glad to receive and answer inquiries for garage plans, but in order that there may be as little delay as possible in submitting the plans desired it is imperative that the following information be given:

Size of plot, with rough sketch showing shape and its relation to adjoining plots; name and number of departments operated; number of cars to be shown in salesroom; number of cars in garage; any other pertinent details.



Everything in this store is where the customer can see it

THE possibility of making additional profits through the sale of accessories is not always appreciated by the garageman. In many cases he considers the storing and servicing of

cars to be his sole function. The sale of accessories is left to someone else.

But the garageman is particularly well situated to sell accessories. He has his storage customers with whom he is in constant and intimate contact. He knows more about what the various owners need in the way of supplies and equipment than anyone else, and consequently is able to go about filling these needs intelligently. Furthermore, if his business is located in a residential part of town where many people have their own garages, another source of trade is open to the garageman.

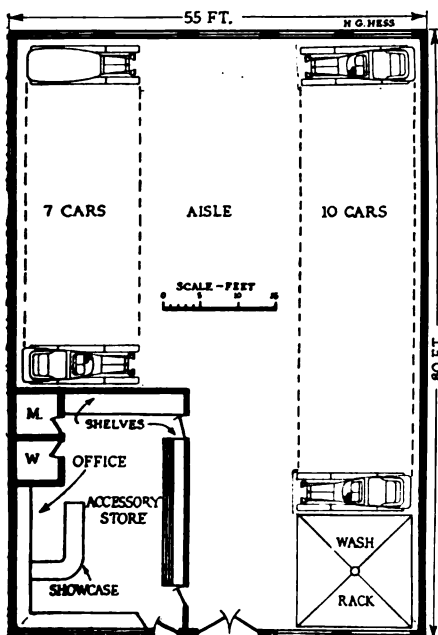
A small accessory store to one side of the entrance to the garage does not reduce the storage space materially, and it can be made to pay greater profits than if it were used for storing cars. The plan shown on this page is an illustration of how a profitable little accessory store can be worked into a garage building. The store has large display windows facing on the two streets. Along the left side, there is a display case and counter, and in back of it there is a desk for the use of the manager. Along the opposite wall shelves and bins are located and across the back of the store there is a tire rack.

Neatness and cleanliness are important factors in merchandising. The store interior shown on this page has both of these characteristics and the garageman

will find that it pays him to keep his store this way. Before making a sale, it is necessary to get the prospective customer into the store and an attractive interior will help to accomplish this end. The store is the place to display and sell, and the merchandise exhibited should be attractively arranged so as to create a maximum of interest. Glass display cases for polished articles that require protection and bins for package goods and things that will not be injured by exposure are provided in this store to foster the buying instincts of the customer.

The indicated storage capacity of the garage is seventeen cars. The wash rack can be used for this purpose also when it is not being used for car washing. No special provision has been made for a shop but a portion of the storage space can be used for this purpose. In a building of this size, we do not think it would be advisable to provide a separate room for the shop.

No columns are shown as in a building of this width it is a simple matter to design an economical truss that will support the roof. Three sides of the building are light so that no artificial illumination will be required. We would suggest that at least one skylight be placed along the dark wall at about the center as the distance from any window at this point is quite large.

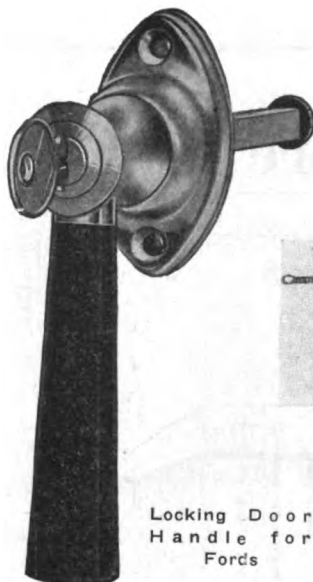


The accessory store takes a small part of the total floor space in this building

Automotive Equipment

LOCKING DOOR HANDLE FOR FORDS

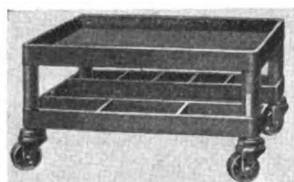
This handle may be installed by simply drilling two holes in the door for the mounting screws and counter boring them for the retaining lugs. These lugs are provided in the rear of the escutcheon plate to prevent the handle being turned and the door thereby being opened if the mounting screws are removed. A washer on the end of the lock spindle prevents the handle from being withdrawn sufficiently to disengage these lugs. Price \$4.—Briggs & Stratton Co., Milwaukee, Wis.



Locking Door Handle for Fords

UNDER DOG TOOL TRAY

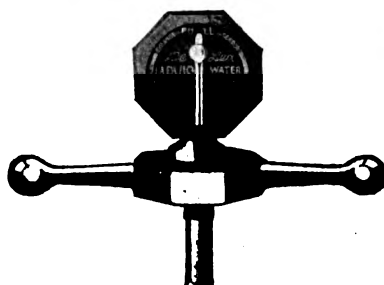
This tray is low enough to pass under the runningboard of any automobile, and yet is large enough to hold all the tools needed for the average repair under the car. The upper tray holds wrenches, cold chisels, screw drivers, pliers, etc., and the lower tray is fitted with pockets for cutters, nuts, washers and bolts of various sizes. The tray is made of cast semi-steel and mounted on four casters. It is painted red. Size 10 in. x 12 in. x 7 in. Price \$6.—Walker Foundry Co., Erie, Pa.



Under Dog Tool Tray

JARVIS WATER INDICATOR

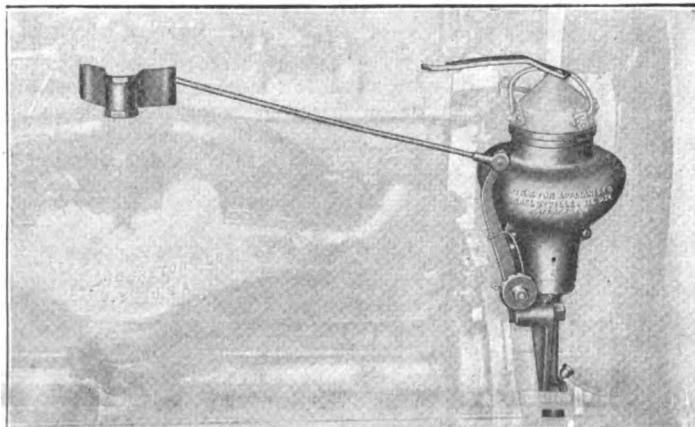
This device is mounted on the radiator cap, and indicates the water level in the cooling system. It is made of brass and is finished in polished nickel. A special cap is provided with horizontal arms to assist in screwing off the cap. Price De Luxe Model \$7.50, Standard model \$5.—Jarvis & Jarvis, Inc., 204 Monroe Avenue, Grand Rapids, Mich.



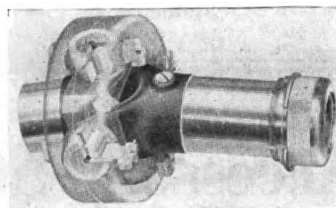
Jarvis Water Indicator

SUPERIOR GOVERNOR FOR FORDSON

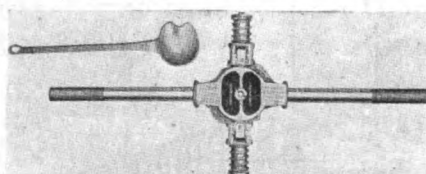
In order to install this governor it is necessary to remove the timer and install a gear on the camshaft. The governor case is placed where the commutator was originally located. The governor case is made of aluminum. All parts are well lubricated and enclosed from dust and dirt. Special grease cups are provided for the gears. The governor shaft is mounted in ball bearings. This governor is said to hold the speed of the engine within 8 per cent. Weight 8½ lbs. Price \$35.—Tractor Appliance Co., Shelbyville, Ill.



Superior Governor for Fordsons



Mechanics Universal Joint



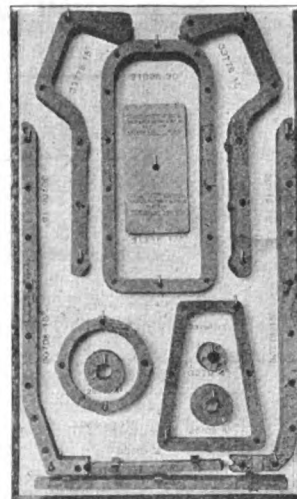
Hempy-Cooper Rebabbiting Jig

MECHANICS UNIVERSAL JOINT

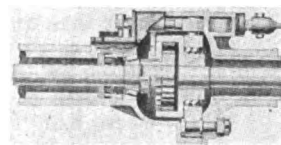
This is an oil lubricated universal joint which is designed to retain the oil over long periods. The principal parts are the housing, made in two parts, the two yokes with driving trunnions and the four bushings. The housing, which also serves as the connecting driving member, is made of pressed steel, and the edges of the housing are ground to make the joints oil tight.—Mechanics Machine Co., Rockford, Ill.

HEMPY-COOPER REBABBITING JIG

A special tool for rebabbiting the main bearings of the Ford engine. This jig may be used cold to babbit bearings in a cold engine. It opens and closes like a jack knife and also shears off surplus babbit.—Hempy-Cooper Mfg. Co., Kansas City, Mo.



Wisoid Gasket Holder



Ahlberg Dual Transmission for Dodge Cars

WISOID GASKET HOLDER

With this washable, enameled sheet steel gasket holder a clean and inviting display of 325 Wisoid gaskets for Fords is provided. It eliminates shop injury to drawer-stocked gaskets and provides a visible inventory against depletion of stock. Wisoid gaskets are made of chemically treated vegetable fibre and, it is claimed, do not require shellac to put on nor the scraper to take off. List price, complete, \$32.—Horace H. Eckhouse, 1834 Broadway, New York.

AHLBERG DUAL TRANSMISSION FOR DODGE CARS

Only two working gears are employed in this transmission, one being of the internal type and one being a spur type. The internal gear is brought into mesh with the spur radially, instead of laterally, thus insuring against stripping the teeth while shifting.—K. E. Ahlberg Co., Hill St. and Eighteenth, Los Angeles, Cal.

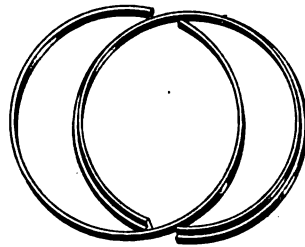
NEW NATIONAL CASH REGISTER

The new Class 1100 is a low priced register that issues a receipt with every transaction. It is built in several models to meet the requirements of different businesses. At each operation of the register a receipt is printed and issued

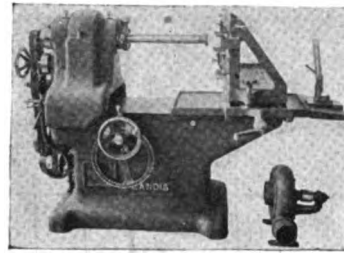
which shows the merchant's name and address, the amount and number of transaction and the date. A duplicate record is printed on a paper roll within the machine. Adding wheels within the register show the amount of money that has been taken in. The number of No Sale, Paid Out, Charge and Received on Account transactions are recorded together with the total number of all transactions made.—National Cash Register Co., Dayton, Ohio.

DOUBLE SEAL RING

A two piece piston ring. The smaller section fits in a groove in the larger section. The opening in the smaller section is directly opposite the opening in the larger section. The smaller section is prevented from turning by means of a small brass pin. All pistons on which these rings are used should have an oil groove with holes drilled in it. Rings installed to hold compression are placed with the larger section on top and those installed to hold oil are placed with the larger section on the bottom.—Double Seal Ring Co., 1517 Michigan Avenue, Chicago, Ill.



Double Seal Piston Ring



Landis Cylinder Grinding Machine

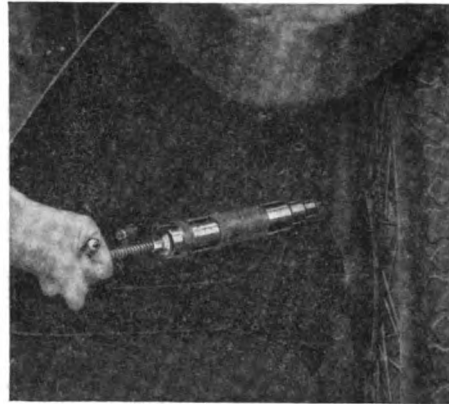
Ford gasoline tank fits in the tall compartment and is easily filled by pulling forward the seat. The tall compartment is floored with metal and provides additional room for tools and luggage. The seat and back are upholstered with imitation leather. The bodies are primed with medium brown paint.—Price \$89.85.—Race-Way Body Co., Indianapolis, Ind.



Lox-On Dust Cap

LOX-ON DUST CAP

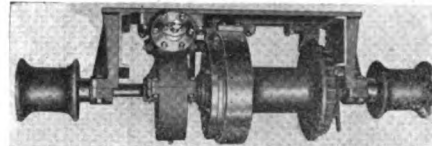
This dust cap prevents the air from a leaking valve from leaving the tube. It is applied by slipping it down over the valve stem as far as it will go and then a twist of the wrist locks it on. Price 50 cents each.—Collins Puncture Proof Tube Co., Hackensack, N. J.



"Dot" High Pressure Lubricator

LANDIS CYLINDER GRINDING MACHINE

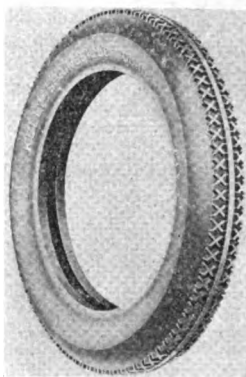
This machine has been especially designed for regrinding cylinders. The grinding wheel spindle center of rotation is 10 in. above the top of the work carriage so that large castings may easily be handled. The grinding wheel spindle regularly furnished will grind 15 in. deep and the wheels 2½ and 3 in. in diameter are included as regular equipment. The eccentric adjustment of the spindle ranges from 1/16 in. to 1-1/16 in. which permits grinding holes as large as 5½ inches. The work carriage has a cross movement of 27½ in. The machine is arranged for either direct motor drive or for lineshaft drive through a small overhead counter.—Landis Tool Co., Waynesboro, Pa.



Erie Underslung Motor Truck Power Winch

ERIE UNDERSLUNG MOTOR TRUCK POWER WINCH

Compactness is the feature of this power winch. It fits in the rear end of the truck frame under the floor and is made to fit any chassis 33 in. or wider and up to a 9 in. frame. All mechanism is inside the frame. The winch can be arranged for operation either from the driver's seat or from the rear of the truck. The drum is driven by a friction clutch and is readily adjustable. The nigger-heads are independent of the drum and the outfit can be supplied without them if desired.—The Erie Holst Co., Erie, Pa.



Kant-Slip Cord Tire



Sterling Unit-Cell Storage Battery

"DOT" HIGH PRESSURE LUBRICATOR

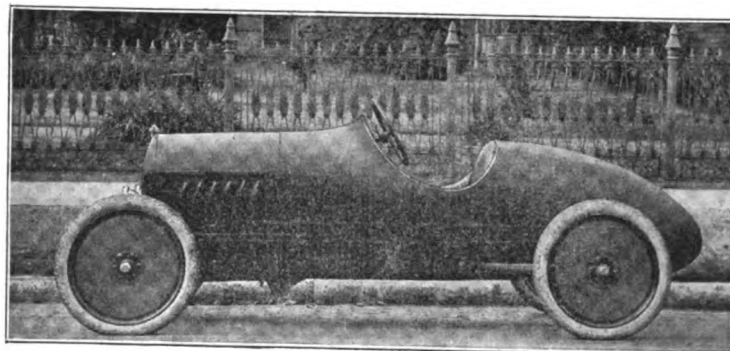
The complete outfit consists of a grease gun, a filler for the gun, nipples to conduct the grease from the gun to the bearings and dust caps for the nipples. In using the gun its nozzle end is placed over the nipple on the grease cup and the gun is then turned a quarter turn to the right. During the first half of this turn the gun is securely clamped to the nipple and the connection is sealed against any amount of grease pressure that may be required for lubricating the bearings. During the second half of the quarter turn to the right the valve in the nozzle is opened, permitting the grease in the gun to be forced through the nipple onto the bearing.—Carr Fastener Co., Boston, Mass.

KANT-SLIP CORD TIRE

A new Kelly-Springfield tire with a special design of non-skid tread. Prices range from \$28.40 for the 30 x 3¼, \$46 for the 32 x 4, \$65.40 for the 33 x 5, up to \$180 for the 40 x 8.—Kelly-Springfield Tire Co., 1710 Broadway, New York City.

RACE-WAY BODY FOR FORDS

The body is built of 20 gauge steel throughout. The standard



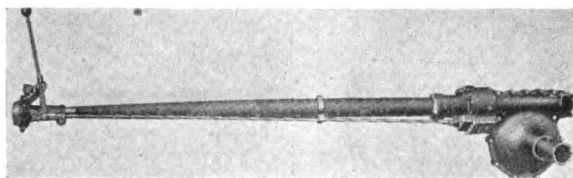
Race-Way Body for Fords

STERLING UNIT-CELL STORAGE BATTERY

The feature of this battery is that each cell is an individual, interchangeable unit. In the case that one cell goes dead it may be removed by screws, the screws which hold the connectors on, and removing the cell. The battery is sold with an eighteen months' guarantee. Prices are as follows: Type U-C 11-6, \$36; type U-C 13-6, \$40.50; type U-C 9-10-12, \$45.—Sterling Storage Battery Co., Inc., Schenectady, N. Y.

AHLBERG TRANSMISSION FOR FORD TRUCKS

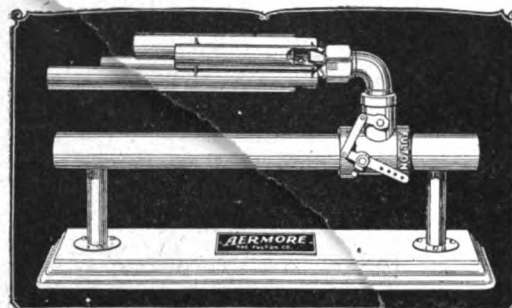
This transmission is an auxiliary gearset. Two working gears are employed, one being of the internal type and the other of a spur type. The internal gear is brought into mesh with the spur radially. There is but one bearing employed in this unit, which is an annular ball bearing. Through the use of this device the Ford truck is given four speeds forward and two in reverse.—K. E. Ahlberg Co., 1724 South Hill St., Los Angeles, Cal.



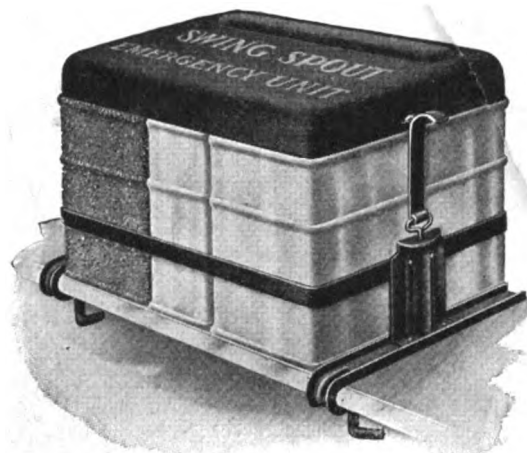
Ahlberg Transmission for Ford Trucks



Ambu Battery Box Scraper



Aermore Exhaust Horn Display Stand



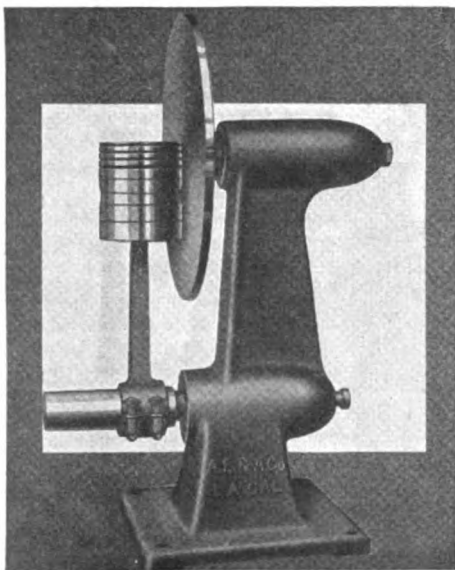
Swingspout Emergency Unit

AMERICAN PISTON SQUARE

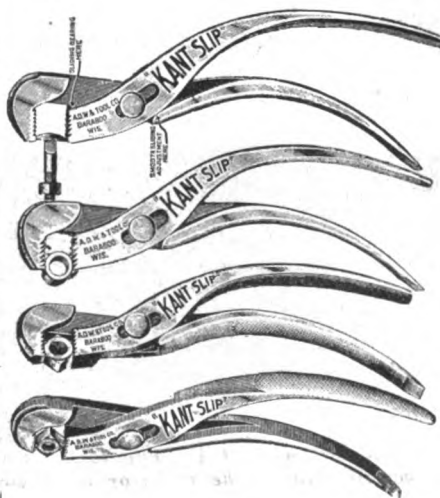
A jig for accurate aligning of pistons, wrist pins and connecting rods. It will handle connecting rods from the Ford size up to 22 in. in length. The castings are heat treated and seasoned to preserve the accuracy of the jig. The disc and mandrel housings are machined and ground. The disc and spindle have an adjustment to the piston face by means of a rapid thread lead screw and tobin bronze nut. The weight is 140 lb. and the disc diameter is 16 in. —American Engine & Airplane Co., Los Angeles.

SWING SPOUT EMERGENCY UNIT

The unit consists of three containers with a holding rack and dust-proof covers. The containers are made of galvanized steel and have the swingspout and valve. The spout when closed lies in a depression in the top of the container. The oil container holds slightly over 1 gal. and the water and gasoline containers something over 2 gal. each. The containers, holding rack and cover are neatly finished in baked enamel. The water container is blanket covered. The top cover is felt lined to prevent dust or dirt accumulations on the top of the containers. Price \$12.50.—Swing-



American Piston Square



Kant-Slip Wrench

spout Measure Co., 404 North Los Angeles St., Los Angeles, Cal.

AMBU BATTERY BOX SCRAPER

A special tool for removing the compound in battery boxes which will be found useful in many other ways around the service station. Price 50 cents. —American Bureau of Engineering, 1601 South Michigan Avenue, Chicago.

AERMORE EXHAUST HORN DISPLAY STAND

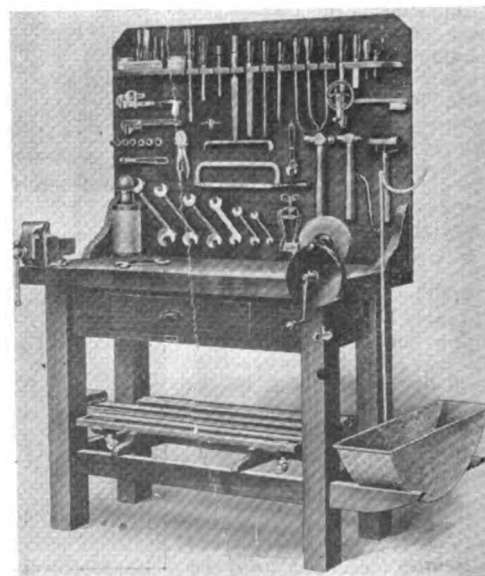
A special stand for displaying the Aermore Exhaust Horns which will be supplied to dealers free of charge by the manufacturers of this device.—The Fulton Co., Milwaukee.

KANT-SLIP WRENCH

A self-adjusting wrench for use on pipes and nuts. It is made of drop forgings, and the parts are machined and the teeth milled. It is designed to take the place of pliers, a pipe wrench or nut wrench. Parts are interchangeable. It is made with smooth jaws for use on nuts only, if desired. The length is 8 in. and the width 1½ in. Maximum opening is ¾ in. One of the handles may be used as a screwdriver. Price \$1.50.—Allan-Diffenbaugh Wrench & Tool Co., Baraboo, Wis.

MOTOQUIP

A completely equipped work bench for the use of the mechanically inclined owner. The bench is constructed with a maple top and is equipped with over 50 tools and devices for repairing and keeping the car in good condition. On the backboard of the bench there is a silhouette of each tool painted in red, so that tools are always replaced in the same position. Included in the equipment is a tube-testing tank and a creeper.—H. C. Dodge, Inc., 32 Alger St., Boston.



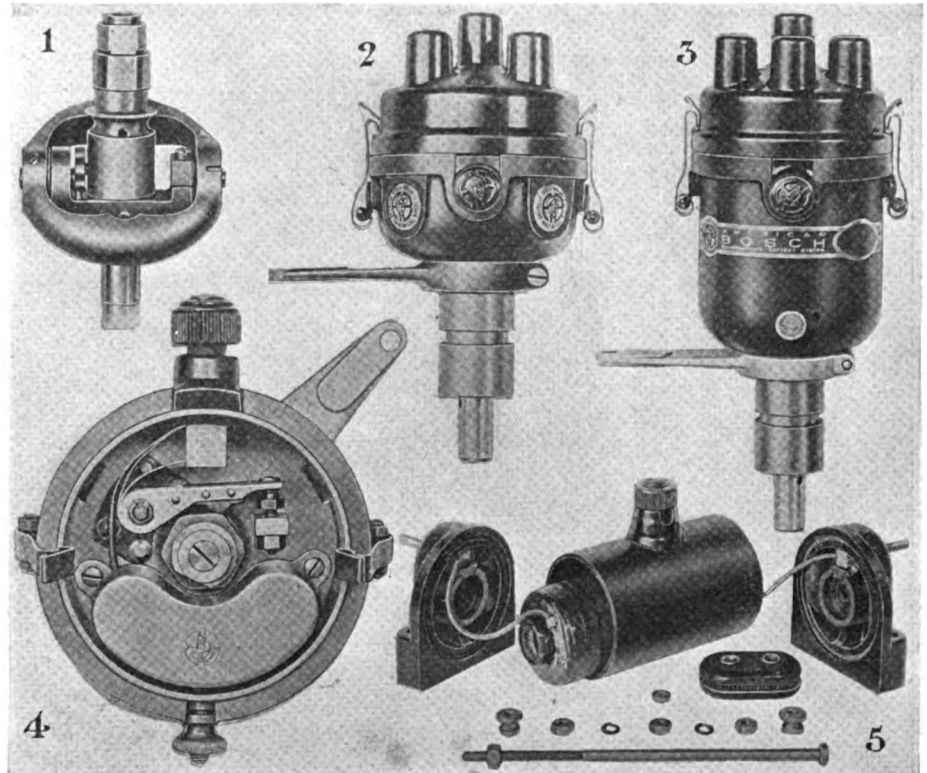
New Bosch System of Battery Ignition

Types Provide for Either Manual or Automatic Advance of Spark—Cable Attachments Simplified

A NEW system of battery ignition has been added to the line of automotive electrical equipment manufactured by the American Bosch Magneto Corp., Springfield, Mass. It is manufactured with two types of timer distributors—Type T has automatic spark advance whereas Type TM is controlled manually. Each outfit consists of five distinct units: main housing, interrupter cup, compensating feature, distributor and ignition coil.

The main housing, the lower end of which forms the bearing for the timer shaft, is made of soft gray iron and is machined to receive the interrupter cup which rests in the upper section. Type T incorporates sufficient depth in its shell to accommodate the governor mechanism and is consequently of greater height than Type TM. The distributor cap is held in position by means of spring clips. The spring clips are fastened by tubular rivets which provide for the ventilation of the interrupting and distributing mechanism.

By moving the main housing, the angular position of the interrupter cup and the distributor cap mounted thereon is changed in relation to the timer shaft and the cam around which it moves, thus changing the timing of the spark without changing the angular relation of the distributor parts. When used in connection with the compensating feature, the manual control provides an increased



1—The governor which controls the automatic advance feature. 2—The timer-distributor unit arranged for manual advance. 3—The timer-distributor arranged for automatic advance. 4—Breaker mechanism. 5—Coil dismantled

timing range. The compensating system is lubricated by the splash system.

The interrupter is assembled in a cup which also contains the condenser, and the whole unit can easily be removed for

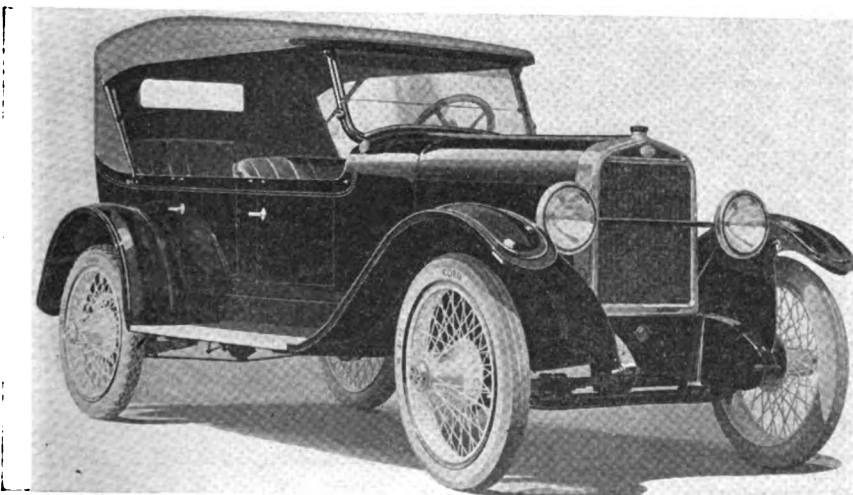
inspection without disturbing any of its component parts or electrical connections. The compensating feature consists of a governor of the tilting ring type, and is carried on the timer shaft. The spring which resists the tilting of the governor ring is adjustable, and various springs of different tensions are made so that the requirements of the engine can be accurately supplied.

The ease with which the high tension cables are attached to the distributor cap is an important feature of this system. It is only necessary to cut the cable off flush with stranded copper core and push the cable into the towers of the distributor cap. A patented clip grasps the cable and is said to make a perfect electrical connection.

The ignition coil is so constructed that all parts are readily accessible. It is mounted separately, preferably on the rear of the instrument board. The same coil is used for either 4, 6 or 8 cylinder timer distributors, and operates on 6 or 12 volt systems—the only change necessary is the selection of the proper ballast coil which is connected in series with the primary winding.

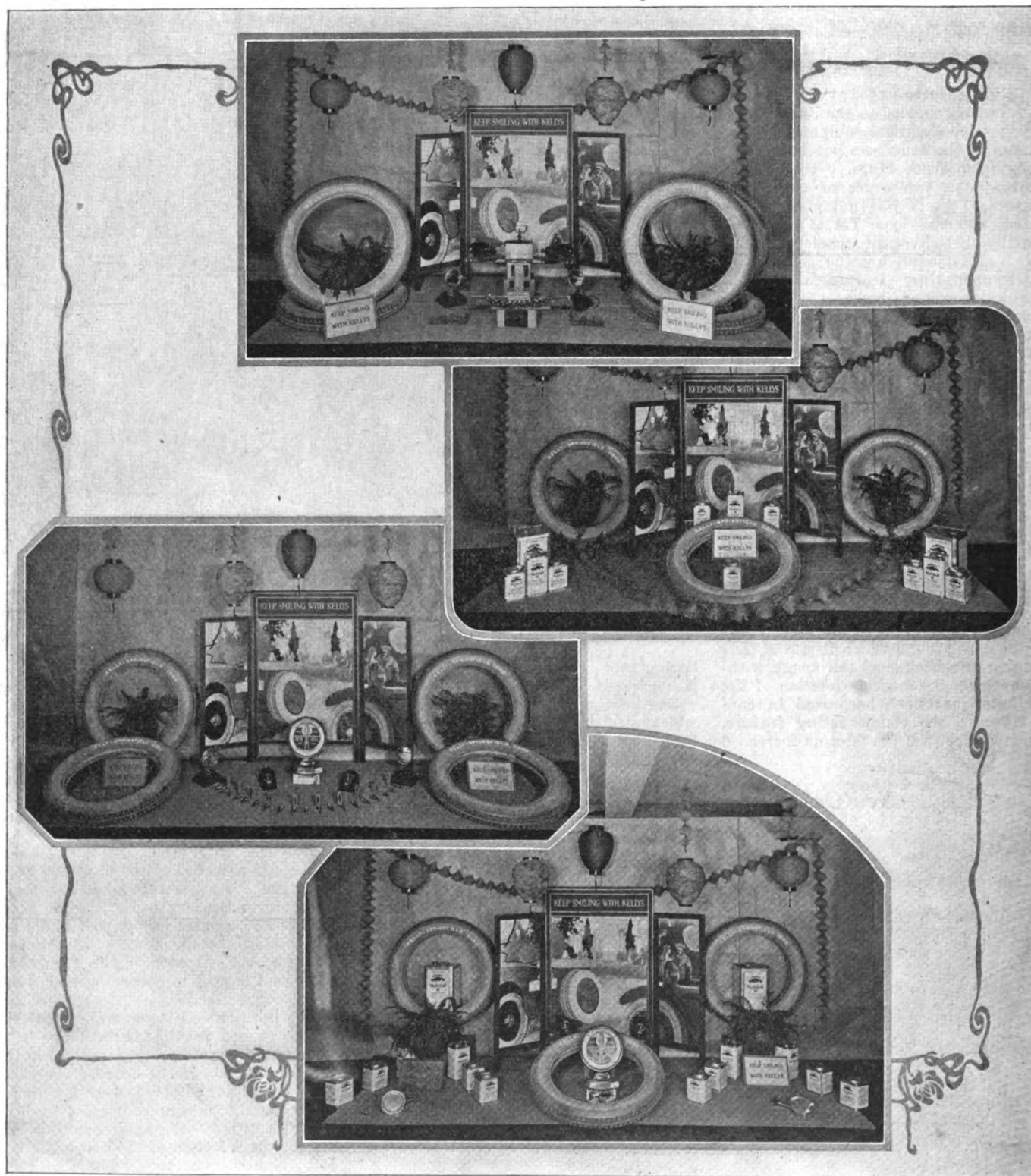
S. A. E. mountings are provided for camshaft speed operation, or for operation in connection with a generator. Special installation, such as platform with right angle drive, extra long shafts, etc., are supplied on order.

New Oakland Sport Model, \$1,265



The fifth body model to be placed in the Oakland Six line is the four passenger sport model which sells for \$1,265. Deliveries commenced August 1. The top is specially designed and the windshield has a decided slant. The radiator is several inches higher than that on the standard models

Some Tire and Accessory Displays

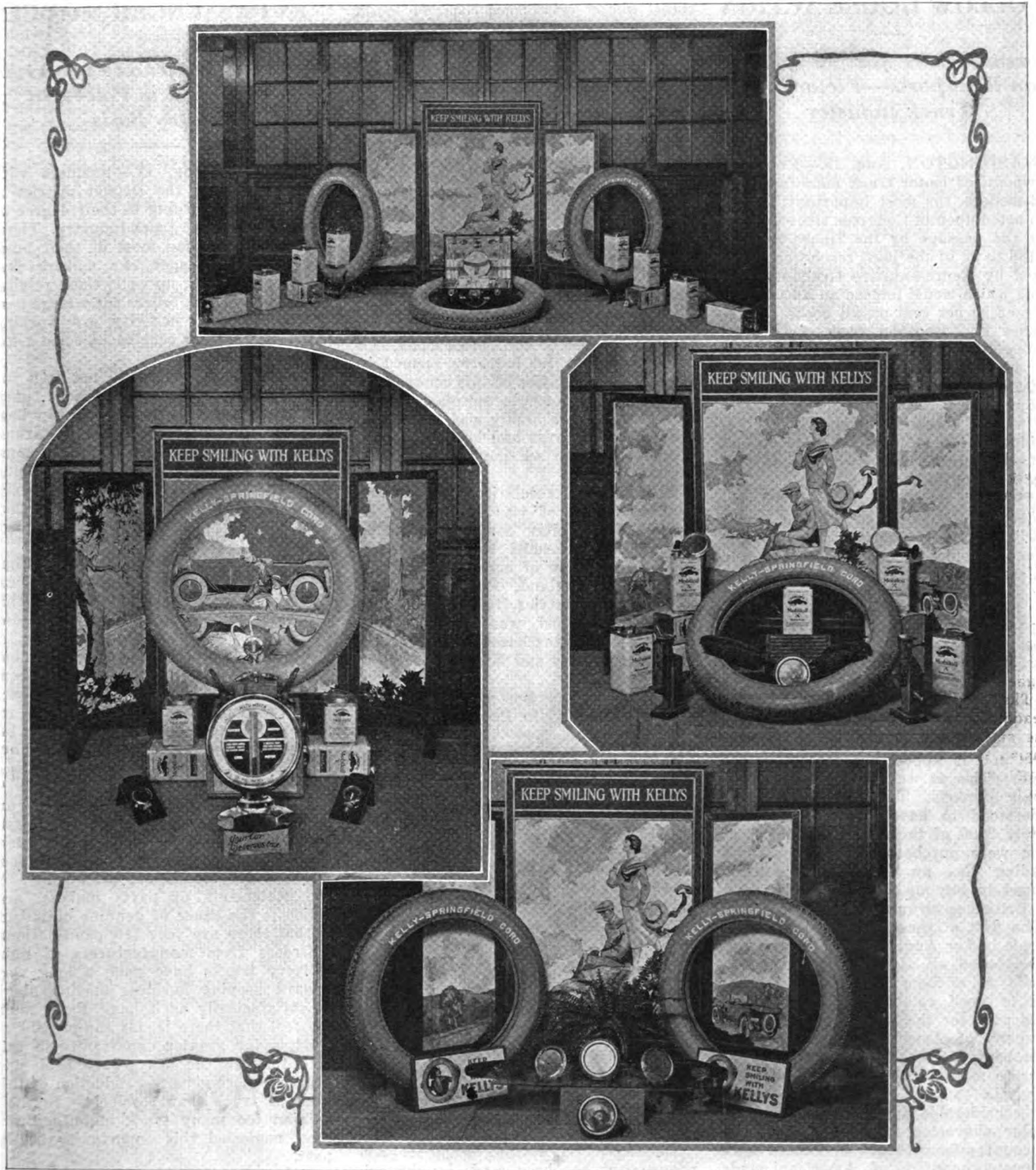


WITH the expenditure of some sense of proportion, a little artistic talent and a few dollars—not more than \$10—many very pleasing and effective window displays may be made by the tire dealer.

On these pages, by way of illustration, are reproduced some of the window display suggestions furnished dealers by J. R. McLennen, manager of the dealer service department of the Kelly-Springfield

Tire Co. Aside from the panel background which is supplied as a part of the company dealer's service, and the tires and accessories to be found in the stock of dealers, there is nothing required but a

For the Progressive Dealer



fern or two, a few feet of crepe paper and a half a dozen Japanese lanterns, all of which may be purchased at a nominal price or borrowed from dealers handling them.

These window arrangements emphasize particularly the excellence of the display containing a few items prominently shown over the windows too often seen which are piled with many items which

are often lost in the conglomerate mass.

Study these windows carefully. They will suggest to every dealer ideas of display in which one or more of their features may be profitably used.

Pass Bill to Tax Reimported Trucks

SENATE EXPECTED TO FOLLOW HOUSE ACTION

Measure Calls for 90% Duty on Reimports—Victory for Truck Industry

WASHINGTON, Aug. 15.—From the viewpoint of motor truck manufacturers and dealers, the most important legislation acted upon in Congress since the war was the passage by the House by vote of 186 to 83 of the joint resolution introduced by Representative Graham of Illinois which would impose an ad valorem duty of 90 per cent on all goods sent to France and England from the United States during the war and reimported for sale in this country.

Every effort will be made to get favorable action on the resolution in the Senate before recess is taken for the remainder of the summer. Senate leaders already have expressed themselves favorably on the measure.

While the resolution is not aimed specifically at reimportation of motor trucks it will effectually end the unfair competition to which American makers and dealers have been subjected for the last six months. Sales, at practically half the list price, of reconditioned trucks which are new to all intents and purposes, have made it difficult to find buyers for vehicles of the same type freshly made in this country.

The Truck Company of America with headquarters in New York has gone into the sale of these trucks on a national basis and is appointing dealers in the larger cities as well as guaranteeing a supply of parts. This company alone is understood to have on hand approximately 2000 of these vehicles. Most of them were purchased from the Slough Trading Co., an English corporation formed to buy up surplus trucks from the British government.

The first of these trucks were placed on sale in Los Angeles and they are now to be found all along the eastern seaboard. All of them are of standard make and in good condition. The average price paid for the trucks by the Truck Company of America is understood to have been \$1000 and the company expects to make a 100 per cent profit on each sale.

A considerable number of trucks of a similar character have been sent into the country from France and there is an enormous quantity of American made automotive equipment in that country which speculators have expected to sell in this country.

Early passage of the Graham resolution by the Senate would put an end to duty free reimportation of these supplies

and imposition of a 90 per cent ad valorem duty would put them in a price class where established dealers could compete successfully for the business which will follow the gradual restoration of normal business conditions.

A clause inserted in the prominent tariff bill by chairman Fordney of the House Ways and Means Committee was designed to cover the reimportation evil but with the passage of the tariff bill indefinitely delayed, the Graham measure will meet the situation much more effectively. Its passage by the House brings to a climax a long and sometimes discouraging fight made by some of the elements within the automotive industry in behalf of truck dealers and manufacturers.

For weeks after the first of the Slough trucks appeared on the Pacific coast, few persons within the industry seemed to sense the possibilities of this competition once truck sales again approached normal, but pressure finally was brought to bear upon Congress and leaders in both Houses began to see the seriousness of the situation.

The Graham resolution would cover vast quantities of war supplies of all kinds. The United States Liquidation Commission informed the House that this accumulation of materials was sold to France, England, Poland, Belgium and other countries for \$822,923,000. The original cost was \$1,739,189,302. Much of it was purchased by the governments themselves and later sold to speculators.

The bill will become effective as soon as it is signed by the President.

DEMAND FOR NASH CARS EXCEEDS OUTPUT 50%

KENOSHA, WIS., Aug. 15.—The Nash Motors Co. reports that the demand for its cars following the price cuts last month exceeded production by more than 50 per cent, notwithstanding a considerable increase in the production schedule. Indications are that the heavy demand for cars will continue well in September. Dealers' stocks generally are depleted and orders are being booked for future delivery. The demand for cars is divided almost equally between four and six cylinder models. Sales thus far in August have been fully as brisk as in July when Nash production was 2470 automobiles.

Drop Forge Firm Thrives

INDIANAPOLIS, Ind., Aug. 16.—Announcement has been made by the officials of the Imperial Drop Forge Co. of Indianapolis to the effect that large orders have been received from the manufacturers of the Dort and Lafayette cars which has enabled the company to increase its production near maximum.

PARTS BUSINESS GOOD IN PASSENGER MODELS

Look for Improvement in Truck Field in Fall—On 30-Day Basis

DETROIT, Aug. 17.—Business with parts makers in the Detroit district is good or bad according to their degree of dependency on the truck industry. Those parts makers doing most of their business with passenger car makers find conditions holding up well; those relying chiefly upon truck orders for a large percentage of their activity are working along on a 50 per cent basis, some a little more, some less.

Truck parts makers do not look for real improvement in conditions until spring, though they expect a better business in the fall months due to farmer buying. Real improvement cannot come until industrial companies start using their trucks again, the parts makers citing their own cases to show that they are using only a few trucks of their own fleets.

In the passenger car field business has been at a satisfactory if not normal capacity for the past three months. This same ratio is being maintained to-day and is expected to continue.

Practically all business now being done by parts makers is on the thirty-cent basis. Though this has had a tendency to keep operations uncertain, it has resulted in a large amount of business being done and many standing orders have been greatly reduced, making certain a large amount of re-ordering to follow.

In quite a number of instances new orders are already being placed and many companies report inquiries which seem bound to develop new business. One condition which stands out prominently in the statements of parts makers, and which is the cause of genuine optimism, is that there are very few cancellations.

Orders from manufacturers of light delivery trucks have gone a long way toward keeping business moving along as satisfactorily as it has. Parts makers feel that there is, for the present at least, a far greater opportunity in this field than in the heavy-duty field, and expect a more general production of this class of truck than formerly. In their opinion too many truck manufacturers have neglected this opportunity in the past.

Milwaukee Sales Good

MILWAUKEE, WIS., Aug. 15.—City dealers report satisfactory business during the last week or two, but country dealers complain over lack of demand.

PIERCE-ARROW MAKES SHARP REDUCTIONS

**Both Passenger Cars and Commercial Vehicles Down—
Three New Models**

BUFFALO, Aug. 15—The Pierce-Arrow Motor Car Co. has made sharp reductions in the prices of both its passenger cars and trucks. The cuts on commercial vehicles have gone into effect and those on automobiles will become effective Sept. 1. In addition, three new passenger car models will be brought out. They will be a 3-passenger sedan, a 4-door, 4-passenger sedan and a French limousine. The prices follow:

Passenger Cars:	New price	Old price
Touring cars.....	\$6,500	\$7,500
Roadster.....	7,000	8,000
Coupe, 3-passenger.....	8,000 (new)	
Coupe-sedan, 4-passenger.....	8,000	8,500
Town brougham.....	8,000	8,500
Sedan, 4-door, 4-passenger.....	8,250 (new)	
French limousine.....	8,250 (new)	
Limousine, 7-passenger.....	8,250	8,750
Landaulet.....	8,500	9,000
Sedan, 6-passenger.....	8,500	9,000
Trucks:		
2-ton.....	3,200	3,750
3½-ton.....	4,350	4,950
5-ton.....	4,850	5,700

Cut Traylor Trucks

CORNWELLS HEIGHTS, PA., Aug. 15—Lower prices for all models of its trucks have been put into effect by the Traylor Engineering & Mfg. Co. The prices follow:

Model	Old Price	New Price
B-1½ ton.....	\$2500	\$2390
C-2 ".....	3000	2850
D-3 ".....	3500	3300
E-4 ".....	4700	4450
F-5 ".....	5100	4700

COLUMBUS DEALER HELPS WORKERS DURING HEAT

COLUMBUS, OHIO, Aug. 16—J. M. Thompson, president of the Carroll-Thompson Co., Ford dealers, which operates a large service department, has devised a method of increasing the efficiency of his forty-four men working in the service department during the extreme heated period. The shop, which is a modern one, is equipped with two large fans used to blow the air through the heating apparatus. When the hot weather arrived it was figured that these fans could be used to blow the cold air in the shop as well as hot air and the boiler was placed in operation for that purpose. As a result the temperature of the shop was always comfortable and the efficiency of the men was likewise increased. It is an idea which will be followed at every excessive hot period in the future.

Alabama After Thieves

BIRMINGHAM, Ala., Aug. 16.—Under a bill prepared by Solicitor Joseph R. Tate for introduction at the coming special session of the legislature, the maximum penalty for stealing an automobile in Alabama would be increased by ten years.

ASK CAROLINA'S GOVERNOR TO "FREE" AUTOMOBILE CARRYING HOOTCH

SPARTANBURG, S. C., Aug. 16—Governor Robert A. Cooper of South Carolina has been asked to pardon an automobile. Officers at Georgetown, S. C., seized a car with whiskey. Under the law, the Government sells the car and the booze is destroyed. The Savannah (Ga.) Commercial Bank and the Savannah-Marmon agency have petitioned Governor Cooper to pardon the car on the ground that neither knew of the alleged whiskey hauling in the machine. Officers and citizens from Georgetown made the trip too Columbia and besought the Governor not to show clemency. As many automobiles hauling moonshine whiskey are seized and sold, the action of the Governor in this case will be watched with considerable interest.

USED CAR STOCK GREAT, MILWAUKEE SALES HIT

MILWAUKEE, WIS., Aug. 15—Used cars have once more become a drug on the market in this territory and affecting adversely the movement of new cars, despite which, however, the volume of sales is being maintained at a satisfactory rate. New car purchases involve acceptance of used cars to perhaps a heavier degree than ever before, in addition to which a good many cars have been thrown on the market by owners who need ready cash or are trying to unload before the end of the real motor-ing season.

In a general way, closed cars are moving best and more than one-half of purchasers are asking for coupé or sedan types. It is reported that Ford sales are just about holding their own in Milwaukee after making a steady advance for about sixty days.

U. S. TRUCKS AT CUT PRICE FELT IN PHILADELPHIA

PHILADELPHIA, Aug. 16—Truck dealers here are complaining that the second-hand government trucks from Camp Holabird, now being sold in Baltimore at deeply slashed rates, are interfering with sales. Many Philadelphia contractors have been buying them. One contractor who purchased several and resold them cleared a big profit.

Midwest Gets Extension

INDIANAPOLIS, IND., Aug. 15—A two-years' extension of credits, dating from June 27, which was asked the creditors of the Midwest Engine Co. because of the industrial depression which has made it difficult for the company to liquidate its inventory, has been granted, this representing more than 90 per cent of the face value of the claims. No change in the personnel of officers of the company is contemplated by this plan.

ORGANIZE \$2,000,000 COMPANY IN ATLANTA

Business Men Back Industrial Institute Which Will Assemble All Automotive Units

ATLANTA, GA., Aug. 15—With a capital stock of \$2,000,000 and headed by Walter T. Candler, vice-president of the Central Bank and Trust Corp. and one of the best-known business men in the South, the Lullwater Co. has been organized and incorporated to establish an automobile industrial institute in Atlanta. Lionel J. Kahn, well known in automotive circles, has been named general manager of the corporation. Several prominent business men are connected with it as original incorporators.

The purpose of the company is to assemble under a single roof separate and individual industrial units of every kind connected with the automotive business. The idea is to make it possible to rebuild an automobile or a truck in this plant or to repair any automobile or truck regardless of make. This plant will include complete paint shops, trimming and upholstering department, a silver and nickel plating department and departments, each separate, for welding, boring, grinding, etc. In addition, the institute will accommodate tire, battery, accessory and automobile novelty dealers, and there will be a general parts department that will stock parts of every standard make of automobile in use in the Southern States.

The new company has leased from Walter T. Candler one of the largest automobile buildings in Atlanta, which is located on Auto Row and provides 114,000 square feet of floor space. The building is five stories in height, and preparations are under way to get the institute into operation as soon as possible.

Kissel Increases Force

HARTFORD, Wis., Aug. 15—Since Aug. 1, the Kissel Motor Car Co. of Hartford, Wis., manufacturer of passenger cars and trucks, has increased its working force by 100 to 125 men who were laid off early in the spring. New business is developing so satisfactorily that it is believed possible to keep on increasing the force steadily. The passenger as well as commercial car departments are benefitted.

A Correction

NEW YORK, Aug. 15—In our issue of Aug. 3, page 42, mention was made of a new Larrabee-Deyo 1-ton truck. Due to a typographical error this appeared as a six speed job, where, as a matter of fact, the truck is a six-cylinder model designed especially for higher speed.

The use of the hyphen instead of the comma completely changed the meaning of the sentence.

FRANKLIN DEALERS TO EXAMINE OWNERS' CARS

Company's 538 Representatives Will Make Monthly Examinations

SYRACUSE, Aug. 15—The H. H. Franklin Mfg. Co. of Syracuse announces that, effective at once, every one of the company's dealerships and sub-dealerships, 538 throughout the country, will make a monthly examination of all Franklin cars in their territory. This monthly inspection will, in the opinion of the officials of the company, go a long way toward placing in the hands of owners a correct understanding of the condition of their cars at all times.

Particular attention will be directed to the fact that in many instances a trifling expenditure will correct minor mechanical ailments, which, if allowed to run, would sooner or later develop into serious defects, resulting in a large repair bill.

Franklin for years back has stressed the service idea, keeping in close touch with its owners by letter and by bulletin.

The plan still is in an experimental stage and the company has not determined definitely how the inspection of owners' cars will be made.

FEDERAL SUITS FOLLOW AUTOMOBILE TOP RULING

NEWARK, N. J., Aug. 16—Claims have been lodged against automobile dealers recently for thousands of dollars by United States Government inspectors, acting under a ruling of the Revenue Department, for taxes for automobile tops placed on automobiles. The matter has been taken up through the National Automobile Dealers Association.

In the ruling it is held that top covers are considered finished automobile parts and are subject to tax even though installed on old top bows. Upon further consideration of the subject, that portion of the ruling has been reversed, and it is now held that when a new top cover is made from raw material for an immediate repair job and placed on old top bows no tax attaches, top covers so made and used not being finished parts within the meaning of the law.

Attention is called to the fact, however, that if a concern manufactures automobile top covers to be kept in stock and sold to meet the demands of customers, tax attaches to all such sales, whether the top covers are sold for installation on new or old top bows.

Bus and Rail Men War

LANSING, MICH., Aug. 16—Truck and bus men of this city have organized to combat the plan of G. R., G. H. & M. Railway, which is seeking, through injunction proceedings, to restrain opera-

tion of inter-city truck and bus lines. The association will be affiliated with the Michigan Highway Transportation Association. Through the local association the operators plan a general improvement of business methods. Officers are: F. N. Rounsville, president; G. F. Downing, vice-president; H. H. Hardy, secretary and treasurer.

CHARLOTTE CAR DEMAND CONTINUES TO IMPROVE

CHARLOTTE, N. C., Aug. 16—The motor car demand in this section is improving. Coddington's special train has just made another trip from the Buick factory, bringing this time 201 automobiles of different types, and other distributors are also bringing them in about as fast as they can get them. The Anderson Motor Co. of Rock Hill reports an improvement in business, their dealers now placing good-sized orders for their product. Charles R. Shanks, vice-president of the company, is of the opinion that recent favorable action by the Federal Reserve Bank toward relieving the cotton situation in the South is one of the principal factors in bringing about this improved condition.

Another factor, says Mr. Shanks, is the realization on the part of car buyers that the limit of low price levels has been reached and that in all probability the next change in price will be upward.

The Anderson plant at Rock Hill, which had been operating on half time during recent weeks, is now going ahead on full time. The company has recently made improvements in its cars and added two new models, and these are contributing factors to the plant's activity.

OLDS ECONOMY TRUCK OUTPUT SET AT 12,000

LANSING, MICH., Aug. 16—Olds Motor Works has outlined a production of 12,000 annually of its new 1-ton Economy truck. Increased sales possibilities have been opened by the remodeling of the truck to 1-ton capacity, officials declare, and business is on the upward trend. Car sales are moving at the rate of 70 to 80 daily, holding to the June and July production figure.

CONDITIONS IN IDAHO REPORTED IMPROVING

BOISE, IDAHO, Aug. 16—Business conditions in Idaho are slowly beginning to pick up, according to a survey made by Guy Flenner, secretary and manager of the Idaho Automotive Trade Association. The State was hard hit by failure of last year's crops to bring profitable prices and some of the automotive men have suffered considerably through the transactions of dishonest dealers. However, some of this latter class of men are out of business, and, with the turning of present season's crops into cash, buying again is on the upward grade.

20 PER CENT GAIN IN JULY SALES ON COAST

Rural Business Shows Falling Off But Prospects Seem More Numerous

SAN FRANCISCO, CAL., Aug. 16—A rather unusual, yet generally favorable, condition developed in the merchandising of automotive vehicles, particularly passenger cars, during July in northern California. While retailers reported sales about 20 per cent above those of June, distributors announced that the ratio of country sales to city sales, usually about three and one-half to four to one in favor of the country sales, had fallen to three to two. To counterbalance this apparent decrease in country sales, however, distributors said they had reports from dealers throughout the rural districts indicating that prospects were more numerous than they had been in eight or ten months. The condition these outside dealers reported is that the farmers and others engaged in handling products of the soil are waiting until the money begins to come in for this year's crops before buying passenger cars.

Both country dealers and distributors interpret this as meaning that sales will be considerably better in the latter part of August and throughout September than they have been for some time. The people are going to buy cars, according to these distributors, but they are planning to pay cash for them, and they have to wait until they have the cash to pay. The surprising factor is that so many people are buying, for, in general, sales are considerably above the June record, and are better than they were in July a year ago.

The dealers' associations throughout northern California are highly pleased with general merchandising conditions, and expect improvement ranging all the way from 100 per cent in the centers of distribution in the agricultural sections of the State to 50 per cent in the largest city—San Francisco. The best feature of the whole situation, however, is that the dealers are not "living on hopes," but are going right along selling cars in sufficient numbers to show good figures on the right side of the ledger. Cash sales are more numerous than they usually are at this time of year, and more prevalent than they have been at any season within the past eighteen or twenty months.

27,000 Making Tires

AKRON, Aug. 16—Employment records from the nine major rubber companies in Akron show that between 26,000 and 27,000 day workers and tire builders now are being employed as compared with about 72,000 in the same factories during the peak months of the tire industry in the spring of 1920. The low ebb of employment is reported to have been slightly under 19,000 factory workers in December of last year.

DEALERS' PLAN SELLS USED CARS ON COAST

Combination Newspaper "Ad" Moves Stock and Eliminates Costly Auctioneers

SAN FRANCISCO, CAL., Aug. 16—In their efforts to move the used cars on hand and to find a solution to a problem which seems destined always to be with the retailers of automotive vehicles, the dealers of San Francisco are using what they call "the newspaper auctioneer." This consists of one or more pages in the newspapers, usually on Sunday, but run on other days with success, in which all the dealers combine to announce, over their names, the used cars they have for sale, the condition of these cars and the prices asked for them. No new cars are mentioned, nor are the names of the new cars handled by the respective dealers printed in any part of the page.

The dealers agree that these prices are fixed and are the minimum figures at which they will sell the cars named. They also guarantee to stand back of any statement as to age, condition or capability of any used car so advertised. The result is that the man who wants a used car can go through this page with his morning coffee and learn exactly what he can get at the price he has to pay, and what he can expect the car he buys to do for him.

Idea Moves Stocks

The idea, according to the dealers, has moved used cars for them when no other method of advertising succeeded. The dealers, and the distributors as well, are, in many instances, opposed to the open-air market for used cars, and virtually all of them are against the automobile auctioneer. One dealer put their argument this way:

"The auctioneer is not always particular what he says about the good qualities of a car; frequently he unintentionally exaggerates these qualities. This sometimes misleads the buyer in a manner which the dealer would not do. The auctioneer costs money; he must get more out of a car than the dealer would need to get to make a profit if he sold it from the floor. Consequently, the buyer has to pay more than he would have had to pay had he followed the 'newspaper auctioneer' and bought direct from the dealer. When the buyer finds that he has paid, say \$150, more by bidding at an auction than he would have had to pay had he bought direct from the dealer, he is going to have an unfriendly feeling toward the dealer who held the auction. That's all human nature, but it works out badly for the dealer, so the Motor Car Dealers Association of San Francisco has decided to eliminate the automobile auctioneer and use advertising instead, giving the buyer the benefit of the difference."

The used-car market in San Francisco, Oakland, San José, Berkeley and other cities of this section is fairly active.

DEALERS' LICENSE PLATES MUST ONLY BE USED FOR DEMONSTRATIONS

WILMINGTON, DEL., Aug. 16—A new law passed by the last Legislature, it has developed, through a prosecution in the police court here, prohibits automobile dealers from using their dealers' license tags for any purpose except on cars which are being demonstrated. Heretofore these tags have been used on service and general business cars of dealers.

PHILADELPHIA TRIES USED CAR SALES SCHEMES

PHILADELPHIA, Aug. 16—Attempts to move used cars—many of them successful—accompanied by extended use of newspaper advertising space and large temporary signs have characterized the trade here of late.

A few leading dealers and distributors have asserted that July, particularly toward the end, proved one of the best months in the year for new cars, but for the majority of agencies the period was quite flat. All agree, however, that August sales, because of an extra spurt of energy, exceedingly noticeable among nearly all organizations, promise well. July was better than June, and August will probably be ahead of July in about the same ratio, say dealers.

Truck sales are so flat that several dealers talk of dropping them and concentrating on something else. Repair parts are not selling well, except in rather isolated instances, where special efforts have been made to push them. One hardly hears any more talk of trailers, except in houses specializing in those vehicles.

Wisconsin Agent Dies

MILWAUKEE, Aug. 16.—Moses D. Newald, head of the M. D. Newald Co., Milwaukee, Wis., State distributor of the Stewart truck, and vice-president of the Milwaukee Automotive Dealers Association as representative of the truck industry, died after a brief illness. He was born in Canada and went to Wisconsin in 1864, going to Milwaukee in 1904 and establishing a large business in buying and selling horses and wagons.

Fisk Stockholders Meet

CHICOPEE FALLS, MASS., Aug. 15—At special meetings of stockholders of the Fisk Rubber Co. and the Federal Rubber Co., held here to consider re-financing proposals, adjournment was taken without definite action. The plan calls for the purchase by the Fisk company of all the assets of the Federal company as well as the Ninigret company. The number of proxies received from stockholders since the proposal was submitted is said to have been encouraging. The outlook for the Fisk and Federal companies is favorable if they have adequate working capital.

VACANT LOTS USED IN WILLYS SALES STUNT

Retail Campaign Brings Cars at Prospects' Doors—Employ Ballyhoo Methods

TOLEDO, Aug. 16—The vacant lots in various parts of the city of Toledo are being employed by the Willys-Overland Co., Inc., in their retail selling campaign for new and used cars during the summer months. So far the results have been very good, according to Lewis P. Kinsey, who is in charge.

Economy in sales is the impetus for this drive into the home territory of the buyers.

The sale and show is preceded by a house-to-house distribution of pink bills. They announce the affair and tell the place. This is cheaper than newspaper advertising and gets to the particular locality without much waste.

Then one of the branch office's trucks is fitted up with a large sign reading:

"Open Air Show and Sale at Main Street and Starr Avenue."

The date and Overland signature are also attractively arranged. Inside the sign is a calliope operated by the car itself. The whole arrangement is very inexpensive and yet it brings out the folks wherever it goes. It is using circus methods to get folks to neighborhood automobile shows.

All-Around Publicity

The vacant lots are free usually because the real estate dealers and owners like publicity as well as automotive dealers.

A string of portable electric lights is easily set up wherever the show happens to be.

For the East Toledo sale a downtown site was secured. Fifty of the choice used cars were put on sale and a Dodge roadster was auctioned just to start the party. Bargain prices from \$150 to \$1,500 were in evidence.

And the busy salesmen sold a number of new cars while the used cars were being disposed of.

"Pay As You Ride" is one of the attractive slogans employed to draw the buyers toward sales.

Most of the business is done after dark, when families in the neighborhood are free to come and see the cars at their own convenience.

So far the sales have proved that business is in the suburbs, in the new additions, in the isolated parts of the city, and in the older sections of the town, if only the salesroom and staff are moved out there to a vacant lot.

Moon Dealer Bankrupt

MILWAUKEE, Aug. 16.—The Lochen Motor Co., Milwaukee, distributor of the Moon and dealer in the Hupmobile, has filed a voluntary petition in bankruptcy. Liabilities of \$31,388 and assets of \$1,407 are schedules.

STUDEBAKER AGENT ABSORBS RUST FIRM

*Charlotte Agencies for Hudson,
Essex, Chalmers and Max-
well Given Up*

CHARLOTTE, N. C., Aug. 16—A number of changes have recently been made or are in prospect in the local automobile business. The Studebaker agency for eastern North Carolina and upper South Carolina has been taken over by the Rust Motor Co. This is a new concern, capitalized at \$100,000. James Rust is manager, and is a new man in the automobile field, having heretofore been engaged in the real estate business. The H. L. Morrow Co., former agents for the Studebaker, is liquidating its business, making an assignment with the permission of the creditors of the concern. W. L. Nicholson has been appointed trustee to wind up the company's affairs. The company's liabilities are about \$50,000. Assets are \$25,000 in cash, received for the lease on the building, Studebaker agency contract and machine shop, sold to the Rust Motor Co., and used cars, claims, mortgages on cars, etc., worth from \$15,000 to \$25,000.

The Hudson and Essex agencies, recently given up by Osmond Barringer; the Chalmers, given up by the Burwell-Walker Co., and the Maxwell, by B. & B. Motor Co., have not been placed yet, but developments are expected in a week or two. Neither have the exact plans of the Southern Oakland Co. been worked out since the resignation of Edward M. Wallace as manager, and developments are likely in that field in a short while.

It should be added that the Rust company retains the Morrow organization almost intact for the Studebaker agency, with the addition of Wallace F. Kilgo, formerly sales manager for the Southern Oakland, as sales manager.

Georgia Gas Tax Passes

ATLANTA, GA., Aug. 15—Contrary to expectations the gasoline tax bill in Georgia has been reconsidered and was passed by the State Legislature, now in

session, providing a tax of one cent per gallon on gasoline. The tax is placed, however, on the wholesaler instead of the retailer. There was every indication, too, a week ago, that the bill providing an increase of 25 per cent in general taxation of automobile dealers in the State would pass, but concentrated efforts on the part of the Georgia Automotive Dealers Association and the Atlanta Automobile Dealers Association may succeed in defeating this increase.

TOLEDO DEALERS TO OPEN FIGHT ON REGISTRATION

TOLEDO, Aug. 16—Toledo automotive dealers are beginning to feel the effects of the new anti-theft registration system which went into effect in Ohio on Aug. 15. Every motor car owner in the State is required to register his car with the county clerk and carry a complete description with him at all times. The bill of sale is a feature of the system which is aggravating to dealers.

The officials of the Ohio Automotive Trades Association, who vigorously opposed the measure when it was before the legislature last winter, are already laying plans to revise the law so that a triplicate made at the time of registration for licenses may serve the same purpose as the much-involved registration now does.

The present forms make it almost necessary for each dealer in used cars to keep one man at the courthouse tracing the records of cars he handles, while it throws the owners of cars into the hands of lawyers on many occasions.

Harper Shows Increase

PHILADELPHIA, Aug. 16—Harry B. Harper, president of the Overland-Harper Co., distributor of Overland and Willys-Knight cars, states that, with a handicap of a reduction averaging one-third, the volume of June and July business showed an increase of more than \$400,000 over that of the corresponding months last year; that the two months produced the biggest in the history of the firm and that during those two months \$1,240,000 worth of business was transacted.

COAST ELIMINATES MANY FLY-BY-NIGHTS

*Campaign Against Trade "Bug-
bears" by Association Re-
sults in Success*

SAN FRANCISCO, Aug. 16—Reports from virtually all the counties in the State, from tourists coming into San Francisco from all directions, and from the 43 branches of the California Automobile Trade Association indicate with unanimity that the association has almost eliminated one of the bugbears of motor travel—the incapable and dishonest garageman and service station keeper. The local branches of the association, which are scattered through the State from Siskiyou to San Diego and from Kit Carson Pass to the sea, have constituted themselves committees of inquiry and investigation, to which every motor traveler, or automobile owner in their district, can report any attempt to overcharge, or any failure to perform work paid for. These investigations and the resulting court actions, backed by the State association, have resulted in cleaning up a number of "undesirables" in the automotive industry in this State, and, in many cases, in their replacement by competent, honest men and firms.

The campaigns have been directed especially against the fly-by-night garage man, who often furnishes a fence for thieves, and the repairman who charges all the traffic will bear simply because he can "get away with it," regardless of the actual value of the work he does. Six years ago, when the California Automobile Trade Association was founded, conditions in the trade in this State were such that an automobile owner often could get repairs done only at the pleasure, or whim, of the repair man. Failures in these branches and in the retail department were frequent. Then the association was founded, and from a small beginning now numbers more than 3000 members, so that it is, in a way, a matter of doubt when a repair man, garage keeper, service station operator, or even a dealer, does not belong to the association. The insignia of the organization, the now famous wheel and radiator, has been made standard in eighteen States, and a bonded service organization throughout the United States is now being promoted, based on the plan worked out by this association. This shows what a trade association can do in one State, and a young association at that.

Franklin Shows Gains

SYRACUSE, Aug. 16—H. H. Franklin Mfg. Co. in its mid-year statement to stockholders dated June 30 reports net sales for the first six months of 1921 of \$14,393,858 with a net profit of \$735,826. Sales for the six months equaled 82 per cent of sales for the same period of 1920 and June sales of 1046 cars was the largest for that month in the history of the company.

A Batch of Smiles from Hartford



There are smiles that mean good business and here is about a hundred of them. They are dealers and salesmen of the L. & H. Motor Co., Hupmobile distributor in Hartford. The picture was taken recently at an outing of the L. & H. family

REPEAL OF BURKE LAW SOUGHT BY INDUSTRY

Truck Interests See Ohio Governor—Discuss Friendly Suit As Test

CLEVELAND, Aug. 15—A committee of five that represents every phase of the motor truck industry in Ohio has asked Governor Harry L. Davis to provide means for permitting the Burke law limiting the weight of motor trucks to be amended at the special session of the general assembly, which will be held next January.

The committee also discussed with Governor Davis plans for the filing in court of a friendly suit to test the constitutionality of the law, which becomes effective Sept. 5. The Governor was told that the Ohio truck industry and users of trucks were done a great injustice when the bill was passed and they hope to work out a plan of action with him whereby an early amendment to the law may be made and operation of the law deferred until it is changed.

Members of the committee are P. A. Lewis, Springfield, of the Kelly-Springfield Truck Co.; W. W. Williams, Columbus, representing dealers; W. C. Free-lock, of the Liberty Cartage Co., Cleveland, representing users of trucks; H. A. Waddle of the Goodrich Tire & Rubber Co., representing tire manufacturers and J. S. Schindle of Cleveland, representing business users of trucks.

Lewis is chairman of the committee, which was named by T. R. Dahl, secretary of the White Co., at a recent meeting in this city.

What Will Happen

The committee informed the Governor that if the bill becomes a law these things will happen to the truck industry, users of the vehicles and consumers.

Approximately 15,000 five and seven ton trucks will be eliminated as a transportation medium; \$2,000,000 worth of trucks will have to be scrapped; transportation costs will be increased \$5,000,000 because of the larger number of trucks required to haul traffic now handled and the increased number of employees; milk companies will have to pay one cent a gallon more for transporting that product to the cities and consumers and producers generally will have a new load put on their shoulders.

Under the Burke bill loads allowed on highways are reduced to 20,000 pounds including the truck; weight per inch of tire width is reduced from 850 pounds to 650 for pneumatic tires. Steel tired vehicles are allowed to carry 24,000 pounds and the truck people say this is ridiculous as the steel tired vehicle is harder on improved roads than is the other class of vehicles. When the Governor issued his call for the special session of the Legislature, the committee asked him to set forth amendment of the Burke bill as an order of business.



Don't Pity These Laborers

They didn't finish the job, but they did start it, and they are going to be mighty proud of it when they finish it. Because it is going to be the new home of Ballou & Wright, automotive equipment distributor in Portland, Oregon. Among the "laborers" who participated in breaking the sod were: Edward Norris, Western Manager for the McQuaid Norris Mfg. Co.; William Norris, President of the McQuaid Norris Mfg. Co.; Charles F. Wright, from Ballou & Wright; O. B. Ballou, President of Ballou & Wright, and several others who are interested in the erection of the new building

AUTOMOBILE SHOW FOR ALABAMA STATE FAIR

MEMPHIS, TENN., Aug. 16—Preliminary arrangements for an automobile show at the fourteenth annual Tri-State Fair, Sept. 24 to Oct. 1, have been made by F. D. Fuller, secretary-manager, and a committee representing the Memphis Automobile Dealers Association.

The show will be held in the new building erected last year, occupying a space 70 x 300 feet.

Tom Smart will again head the committee in charge of the show, and will be assisted by F. M. White, Jr., and J. H. A. Campbell, all representing the dealers association. Dealers will begin at once making active preparations for the show.

Just outside the automobile show will be a complete display of motor trucks for farm and commercial use. A tractor show will be another adjunct. Interest in the automobile show will be increased this year by two days of automobile racing. The Speedway racers, including Tommy Milton, Sarles and Ellingboe, will entertain the opening day crowds.

Plant Will Turn Out Trucks

TORONTO, Aug. 15—International Harvester Co. of Canada, Ltd., has announced its wagon and sleigh plant at Chatham, Ont., is being equipped to take over the manufacture of International motor trucks. These trucks have hitherto been made in the United States.

FALL MOTOR SHOW PART OF OHIO STATE FAIR

COLUMBUS, O., Aug. 16—The annual fall display of both passenger cars and trucks will be held at the Ohio State Fair Grounds, Aug. 29 to Sept. 3, under the auspices of the Columbus Automobile Show Co., which is composed of the leading dealers of the Buckeye capital. The show is a recognized attraction at the annual Ohio State Fair and thousands are attracted by the display of motor vehicles.

Automobile Building, which is near the traffic entrance to the grounds and which is 100 x 400 feet, will be used for the display. More attention than ever before will be given to passenger cars, as the truck display will be limited to one chassis of each truck make. In all 200 cars and trucks will compose the show. The officers of the Columbus Automobile Show Co. are: F. E. Avery, president; R. H. Mitchell, secretary, and Anson B. Coates, treasurer. Anson B. Coates has been made manager of the show and all communications should be addressed to him.

Myers Spark Plug to Move

DETROIT, Aug. 16—The plant of the Myers Spark Plug Co. will be moved from Toledo to this city, following arrangements for the financing of the new Detroit Ignition Co., which has taken over the Myers company. The new company will have a capitalization of \$300,000, part of this having been paid over to stockholders in the original company.

SEIBERLING OFFERED SEVERAL TIRE PLANTS

Reported Former Goodyear Head Plans Chain of Small Rubber Factories

AKRON, Aug. 16—Although Frank Seiberling, founder and former president of the Goodyear Tire & Rubber Co., has issued through his secretary, R. C. Ellsworth, a formal denial of his rumored acquisition of the Republic Rubber Co. plant at Youngstown, his recent conferences with trustees of the Republic company and his inspection of other small rubber plants, have given rise to the firm belief that Seiberling plans to stage his "come-back" in the tire industry by establishing and operating a chain of small tire plants scattered throughout the country.

Seiberling virtually is in control of the Lehigh Rubber Co. of New Castle, Pa., which he purchased some time ago at receiver's sale. He is one of the controlling heads of the Star Rubber Co. of Akron. His secretary, R. C. Ellsworth, is heavily interested in the Marion Rubber Co. of Marion, Ohio, while W. E. Palmer, former Goodyear treasurer, now is trustee of the Marion company. Bargain offers for sale of the Republic plant at Youngstown are known to have been made to Seiberling.

In addition, many small rubber plants throughout the country which now are in the throes of financial difficulty have been offered to Seiberling across the bargain counter. Seiberling is expected to make some formal announcement shortly relative to the scope of his renewed activity in the tire industry, and the number of small plants which he expects to control and to operate.

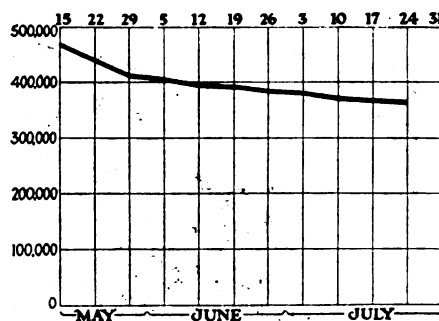
Follow Partridge Move

Soon after Seiberling retired from Goodyear, A. G. Partridge, former vice-president and sales manager of the Firestone company, became sales manager of the Star Rubber Co., in which Seiberling is heavily interested. This move, it is claimed, is the first step toward Partridge becoming general sales manager for the controlling company with headquarters in Akron, which will operate the chain of small rubber companies.

Many former Goodyear officials who retired with Seiberling, and several who have since resigned from Goodyear, now are under negotiations with him, it is reported, and will be lined up for the new organization.

It is also believed that Seiberling is working on new types of tires in his New Castle plant. E. L. Davies, one of the Goodyear compounders and expert rubber chemists, has resigned and has been made development manager of the New Castle plant.

Seiberling has opened offices in the Akron business district and is in daily conference with men of the tire industry.



Idle Freight Car Record

The black line represents the record of idle freight cars throughout the United States. It is a business indicator of interest to all automotive men, and especially to the truck dealers. When the railroads are busy carrying merchandise it follows that manufacturers and merchants are busy fulfilling the orders of customers. Between May 15 and July 24 the average net car surplusage has shrunk from 469,770 to 361,611, a decrease of 108,159. In the week ending July 24 the shrinkage of surplus cars was 10,230. The chart above shows the gradual downward trend of freight car surplusage since May 15.

A. A. A. AFTER CHEAPER INSURANCE FOR MEMBERS

WASHINGTON, Aug. 16—The executive board of the American Automobile Association has decided to widen the scope of the association's activities. One of the subjects which will be taken up is that of automobile insurance. The question has been placed in the hands of a committee which has formulated plans for cheaper insurance for A. A. A. members. Retention of counsel familiar with automobile law to provide free legal advice to members will be given immediate consideration.

A new method of protecting members' cars from automobile thieves is being evolved and will be tried out in the near future in Washington.

The A. A. A. will renew at once its efforts to obtain the passage of a national reciprocity law which would mean that motorists could travel anywhere in the United States for unlimited periods with their home State license tag.

CHEVROLET FACTORY BRANCH ABSORBED

CAMDEN, N. J., Aug. 16—The Millwood Motor Car Co. is a new organization which has taken over the distribution and retail sales of Chevrolet cars for the Camden territory. With the change, the factory branch of the Chevrolet Motor Co. here will be discontinued. The Millwood organization takes over the building, stock of parts and organization of the factory branch, which has been at 424-426 Walnut Street.

The men who comprise the new company are S. F. Miller, who has been sales manager for the factory branch; and J. Harry Fleetwood, who has been Chevrolet dealer at Laurel Springs, N. J. Arthur Blank is in charge of the parts department and Walter Hahn is service manager.

DURANT MOTORS TAKES OVER SHERIDAN PLANT

Production of "Durant Six" to Start Soon—Redesigning and Rebuilding Models

NEW YORK, Aug. 16—The plant of the Sheridan Motor Car Co. at Muncie, Ind., was taken over on Aug. 1 by the Durant Motors Co. of Indiana, a \$3,000,000 corporation, of which D. A. Burke is president and general manager. Only the plant itself was purchased and the new owners did not acquire the inventory which had been assembled by the General Motors Corp. for the Sheridan car.

Production of the Sheridan, which will be rechristened the Durant Six, will not begin for a month or more under the new ownership. The models are being redesigned and rebuilt at the Long Island City plant. They will retain practically nothing of the old Sheridan. The Durant motor will be used and all the principles of design embodied in the Durant Four will be included in the Six. One of the main features will be the accessibility of the various parts and another will be the strength of the chassis.

The general body lines designed by Burke will be retained, except that the hood will be lengthened 8 in. When Burke designed the Sheridan he worked out ideas he long had cherished of building a luxurious car which would sell at a moderate price with many of the refinements found in those of the higher price classes. He sold this idea to Durant and the result was the establishment of the Sheridan division of General Motors. This idea will be retained by the new company, but the car which will be turned out will be much more powerful than the one which was built up to Aug. 1.

The prices of the various models of the Durant Six will be: Roadster, \$1,600; touring car, \$1,650; coupe, \$2,250, and the sedan, \$2,400.

The sedan model of the Durant Four now is ready for production and will sell at \$1,365. The coupe will sell at the same price, but a few changes are to be made in the body lines.

DEALERS HAVE PLAN TO DISPOSE OF TRACTORS

NEW YORK, Aug. 16—Metropolitan distributors of Ford cars who have been compelled by the company to accept shipments of Fordson tractors in order to get the automobiles have evolved the plan of fitting the tractors with rubber tires and other special equipment with the idea of promoting their use on docks, in warehouses and for other industrial purposes. Considerable work also has been done in adapting the machines for snow removal and other municipal work. These dealers found that there is no market whatever for tractors in farm work.

DURANT SAYS MOTOR INDUSTRY WILL LEAD

Greatest Problem Is Credits, He Says—Flays Bankers in Statement

NEW YORK, Aug. 16—Recovery of the automotive industry, which is suffering from the same causes as all other industries, will be surprisingly rapid and will take the lead in industrial activity, in the opinion of W. C. Durant. The automotive industry is and will continue to be an essential factor in the development of civilization, he contends. It has gone through its period of reconstruction, has organized its methods to meet the new order of things and is better prepared to-day for a running start than almost any other branch of industry.

The solution of the gravest of the problems which confront the business men of the country rests upon adequate credit, Durant asserts. In this connection he says:

Need Cheaper Money

"When cheaper money is available for business men who need it, when credit is extended in generous measures to business men who are entitled to it, when Government securities have been put on a 100 per cent basis, we will hear less about frozen credits, courage will be restored and the usual American action, which we all so much admire in place of indifference and apathy, will be in evidence and we will quickly get back to normalcy."

The views of Durant, long a real captain of industry, are contained in a statement prepared by him for the current issue of *Commerce and Finance*. In this statement he arraigns mercilessly the attitude of big bankers and charges them with exploiting the needs of legitimate business for selfish purposes. In this connection he says:

"I contend that much of our present distress is due to extortionate interest rates and restricted credits. In this financial crisis the bankers have not met the situation and are largely responsible for the chaotic condition now existing.

"Never in the history of this country was there greater need for low interest rates and more elastic credits.

Hits at Bankers

"Instead of helping to relieve the situation and restore order, the bankers and those in control of the money supply and credits have been taking advantage of a situation. For months call money rates have been outrageously high, with time money almost impossible at any rate—and this condition existing with our natural and accumulated wealth, with nearly one-half the gold of the world in our possession and with a great Federal Reserve Bank created for the purpose of doing a real service to commerce and industry in an emergency.

"At a time when business in every industry and commercial line is suffering and business men in all lines are

NEGRO BUYS CAR; DIGS UP MONEY FROM PASTURE WITH SHOVEL

SPARTANBURG, S. C., Aug. 16—The local Ford dealer in Easley, S. C., had a unique experience this month. He closed a deal with a negro for a car, whereupon the purchaser invited the salesman to go with him to his farm. They drove out to the place, and upon their arrival the negro seized a shovel, ran to the pasture and began digging. He soon brought up a jar full of money and counted out \$500 into the hands of the salesman. He said that he and his wife had buried the money several years ago for the purpose of buying an automobile and that they had decided to wait till the price came within the \$500 limit they had restricted themselves to.

carrying tremendous burdens, the bankers are exacting the highest rates ever known and forcing liquidation beyond all reason. Word went forth some time ago: 'Liquidate and pay.' And liquidation has been going on at a fearful rate and at a terrific sacrifice."

NORTH CAROLINA RAISES MOTOR INSURANCE RATES

CHARLOTTE, N. C., Aug. 16—The alarming increase in automobile thefts in North Carolina has caused insurance companies to place additional restrictions upon the insurance of cars against theft and to increase the rates an average of 33 per cent. A State-wide investigation into activities of reported gangs of automobile thieves has been instituted.

While no estimate is obtainable as to the number of machines stolen monthly in the Carolinas, insurance men state that the increase in thefts within the last three or four months has been alarming, and that organized gangs have got rich through the theft of machines and their sale in distant cities and countries. It was said that one "company," with headquarters probably in Columbia, exported stolen machines to South American countries until the men engaged in the traffic were caught.

Dodge Has a New Sedan

NEW YORK, Aug. 15—Dodge Brothers have made some changes in the design of the sedan, the new models just beginning to come through to dealers. The total height has been reduced 4 in., but the most conspicuous change is the use of steel disk wheels. The inside arrangements have been shifted somewhat, the divided front seat being eliminated and a solid seat used instead. This has resulted in a change in the door arrangement, so that there are two doors, and, in addition to this, the shape of the glass windows has been changed to a square type.

CREDITORS WANT SALE OF STANDARD PARTS

Vote to Ask Order to Dispose of Property of \$20,000,000 Company

CLEVELAND, Aug. 16—Creditors of the Standard Parts Co. met here and voted to ask Federal Judge D. C. Westenhaver to grant an order for the immediate sale of the property of the \$20,000,000 corporation, which is engaged in making automobile accessories and parts. Judge Westenhaver appointed receivers for the corporation last September upon application of the stockholders.

An all-day discussion preceded the action of the creditors and at times the debate grew stormy. P. A. Connelly, secretary of the company, testified that when the Standard Parts Co. was formed the capital of the corporations entering the combine was written up to the extent of \$5,156,000. Since the merger was formed, he said, it had lost \$8,094,000. He also attacked the inventory filed with the court, the figures in which were prepared by expert accountants.

Connelly said that the inventory should be reduced and he contended that the assets were in reality but \$1,000,000 in excess of debts. Attorney A. V. Cannon, who represents the receiver, Frank Scott, asserted that the inventory was correct and that the assets of the company amounted to approximately \$18,000,000. He said that after paying all debts the preferred stockholders would have left 100 per cent equity in the company.

The creditors have a plan for the sale of the property under which they would bid in the plant, form a new company and offer stock in it to the stockholders of the present corporation. Those not purchasing would lose all they had invested. The creditors would have control of the new corporation.

Judge Westenhaver took under advisement the appeal of the creditors and he did not give his opinion on the petition of the receiver for an order to pay creditors a dividend of 10 per cent on their claims.

FRENCH MUST HAVE THIRD OF GRAND PRIX ENTRIES

NEW YORK, Aug. 16—A cable dispatch from France says that as a result of American-made automobiles winning the Grand Prix the sporting committee of the Automobile Club of France has decided that in the race next year entries will be open to the world, but that unless one-third of the cars entered are French, as well as one-third of the manufacturers represented, the club reserves the right to call off the race. The club feels that this puts the question squarely up to the French automobile makers, who must provide the required proportion of French contestants if they want the race run.

ASSOCIATION ACTIVITIES

Detroit Dealers Have Outing

DETROIT, Aug. 13—Tired Detroit business men, when they want to get away from anything that smacks of business, take a trip up the Snye Carte River. The Snye Carte is guaranteed to take anyone away from anything but the Snye Carte River. So the Detroit Automobile Dealers Association went up the Snye Carte on its annual outing this week.

There were 269 in the party starting off and getting back. The Snye Carte always gives back just about as much as you put into it. The party included all the automobile men hooked up with the association and their friends.

Though the trip was the principal feature of the outing, there were plenty of side features aboard. "Scoop" Shuart and Tom Walker, chairman of the entertainment committee, took care of that. Business had been suspended along Automobile Row at 3 o'clock, and nobody with any business had business on board the boat.

Dinner was served to the accompaniment of the Snye Carte's lullaby. There was an orchestra aboard to help out the river every now and then, and it did. Sometime around 11.30 the party found itself back on Woodward Avenue. The Snye Carte and the dealers are again following their several bents.

Plan "Sociability Runs"

NEW ORLEANS, LA., Aug. 16—One of the plans adopted by the New Orleans Automobile Dealers Association in an effort to solve the used car problem calls for a number of "sociability runs" from this city to nearby cities and towns.

W. P. Parkhouse states that he expects the first trip to be made Saturday, Aug. 20, to Baton Rouge, making Baton Rouge that night and returning to New Orleans Sunday. Baton Rouge is about 100 miles from New Orleans on the Mississippi River.

It is proposed that each dealer contribute one or more cars and invite prospective customers as well as those who have previously purchased cars.

The plan was outlined in a report of the committee, of which J. D. Cathey is chairman, submitted at the monthly meeting of the dealers association, held at the clubhouse of the Louisiana Motor League at Chef Menteur.

The problem of placing value on used cars has become a real menace to the industry with falling prices, dealers declare, and the prices that once took care of repairing and repainting costs are no longer to be depended upon.

Hold School for Salesmen

TOLEDO, Aug. 16—O. H. Chamberlain, Jr., has held two successful schools for salesmen in the Toledo Chamber of Commerce under the auspices of the Toledo Automotive Trades Association. More than 79 salesmen were in attendance at the sessions each day, held from 8 to 9.30 o'clock in the morning. Chamberlain emphasized the selling of used cars. He claimed that the ability to sell new cars is in direct ratio to the salesman's ability to sell the used cars.

Deny Army Car Sale Rumor

ATLANTA, GA., Aug. 15—Numerous reports that the Government has been

selling new motor cars at low prices were said to be without foundation on fact by Quartermaster General Roberts, in a letter to Senator Harris, of Georgia. The matter was taken up with General Roberts on behalf of the automotive dealers of the State, receiving the following letter:

"There are persistent rumors going around that the Government is disposing of new Dodge cars. These rumors are without foundation, as we have no new cars in the army and at the present time there are no passenger carrying vehicles for sale. Vehicles which have been sold to the public were sold at the auction to the highest bidder and were in an unserviceable condition."

ZEE-ZEE RUBBER FILES BANKRUPTCY PETITION

TRENTON, Aug. 16—The Zee-Zee Rubber Co., manufacturers of automobile tires and tubes and doing business through a chain of stores in New York, the New England States, New Jersey and Pennsylvania, to-day filed a petition in bankruptcy in the United States court here. The liabilities are scheduled at \$293,552.19 and the assets at \$434,964.57.

The general business depression in the particular line the company is engaged in is responsible for the failure, according to Herbert P. Backes, attorney for the corporation, who filed the petition. More than one thousand creditors are listed. The plant of the company, at Yardville, a few miles south of Trenton, was built a few years ago and is valued at \$392,000, according to the petition. The plant closed Aug. 1.

CALIFORNIA TO GET TWO REO FACTORY BRANCHES

SAN FRANCISCO, Aug. 15—Simultaneously with the announcement of new prices on Reo passenger cars and speed wagons came also the news of the opening of two Reo factory branches in this State and the incorporation of the Reo Motor Car Co. of California, Aug. 1. Headed by P. L. Emerson, a veteran merchandiser of automotive vehicles and a recent official of the Reo company, the new California corporation will establish its headquarters in San Francisco and Los Angeles, and the San Francisco branch also will control the Reo business in Hawaii, the Philippines, Japan and China.

Byron C. Foy, who left the post of assistant manager of the Reo branch in Detroit, becomes manager of the Los Angeles factory branch. He is vice-president of the California company. Emerson will be in personal charge of the San Francisco office. The change in Reo representation on the Pacific Coast follows the Reo factory policy in arranging for exclusive representation in the more important distributing points. This plan brings about a more intensively cultivated sales campaign.

MOTOR TRUCK DEMAND BETTER IN COLUMBUS

Central Ohio Territory Shows Marked Improvement in Lighter Vehicles

COLUMBUS, O., Aug. 16—A slight improvement in the demand for trucks is reported in Columbus and central Ohio territory. This has been most noticeable since Aug. 1 and is especially marked in the lighter trucks and delivery wagons. Heavy trucks ranging from 2½-ton to 5-ton vehicles are still rather slow.

Truck dealers are of the opinion that with a slow revival of business, which is promised during the fall, there will be continued improvement in the truck business. A better feeling is developing in farming communities, as crop prospects have been improved by recent heavy rains. It is now believed that the worst of the slump in the truck business is now over and that business will show a gradual improvement.

OSHKOSH TRACTOR BUYS ALL LACROSSE ASSETS

LA CROSSE, WIS., Aug. 16—The Oshkosh Tractor Co. has purchased the entire assets of the La Crosse Tractor Co., which for the past five years has manufactured the Happy Farmer tractor, later known as the LaCrosse tractor. All the machinery, tools and material will be removed to Oshkosh as soon as an adequate factory can be completed and production of the same models will be continued there. Work on the factory will be started at once. The plans call for a main building, 500 x 150 feet, modernly equipped. The Oshkosh Tractor Co. is capitalized at \$1,500,000 and is headed by A. D. Paine as president and general manager. Paine also is manager of the Wisconsin Tractor Sales Co. I. G. Hickman of Milwaukee is vice-president and C. C. Shanor is secretary, treasurer and sales manager. L. W. Melcher, factory manager and designer of the LaCrosse tractors, will act in the same capacity for the Oshkosh company.

TERNSTEDT EXPECTS TO PRODUCE AT CAPACITY

DETROIT, Aug. 16—The Ternstedt Mfg. Co., through the acquisition of the England Mfg. Co. and the body hardware plants of the Fisher Body Co., now the largest manufacturer of automobile body hardware in the world, is going into production on a scale which it is estimated will carry it practically at capacity for the balance of the year. The company has been operating at capacity for 60 days, and President Paul W. Seiler declares orders on hand will carry it at full speed indefinitely.

Present business is running at 80 per cent closed body business, and Seiler looks for an increased closed body trade as the season advances.

CHANGES IN THE TRADE

Buick Motor Co., northside agency in Chicago, will have a new \$150,000 home soon.

The Crosstown Corp. of Detroit has been awarded the Michigan distribution for the Velle car.

Leonard B. Orloff Co. has taken over the sales and service of the Chandler car for the Detroit district.

Kingman Moore-Steve Solomon, Jr., of Macon, Ga., have been appointed Dodge Brothers distributors in central Georgia, covering eleven counties about Macon.

Jasper Tire & Rubber Co., Jasper, Ind., and all of its tires, fabric and rubber for the making of tires will be sold at private sale soon by Louis Mehringer, receiver.

Worsham Bros. Motor Co., Houston, Tex., has given up the Houston agency of Chevrolet cars in order to devote more time to the Hupmobile and Franklin agencies.

A. W. Rawlings, Oakland, Cal., has been appointed direct factory distributor for the Marmon 34 in the territory tributary to Oakland. Rawlings formerly was Marmon dealer under the California distributor.

Harry W. Anderson has been appointed general sales manager of the Duesenberg Automobile & Motors Co. He was associated with the American Motors Co. and was sales manager for Stutz Motor Car Co.

C. H. Wells, formerly manager of the New Orleans branch and more recently of the Utica, N. Y., branch of the Chevrolet Motors Corp., has been appointed manager of the Chevrolet Motor Car Co. of Philadelphia.

W. Ross Walton, for fifteen years Philadelphia branch manager for the Firestone Tire & Rubber Co., has been appointed distributor for the Oldfield Tire Co. for Philadelphia and adjacent territory. He will conduct both a retail and wholesale business.

William B. Moyle, San Francisco, who, until recently, was advertising manager for the Chester N. Weaver Co., Studebaker distributors, has been appointed general sales manager for the new Cole Motors, Inc., distributors of the Cole Aero Eight.

Robert W. Woodruff, Atlanta, Ga., for the past four years manager of the southeastern branch of the White Co. of Cleveland, with headquarters in Atlanta, has been appointed vice-president of the company. He has been connected with the Atlanta branch for eight years.

J. G. McGuire, Ltd., Ottawa, Ont., distributors of the Chevrolet cars and trucks for Ottawa, have also been appointed agents for Hull, Que., and district surrounding and may at a later date open a branch office in the city of Hull. The new prices on these lines are in force.

O. J. Cole has been appointed branch manager for the United Motors Service Corp. in Atlanta, Ga., succeeding P. H. Schuyler, who has been in charge for some time. Cole was formerly manager of the Detroit branch. Schuyler has been transferred to the general offices at Detroit.

Keystone Motor Co., which has offices in Indianapolis, Louisville and Cincinnati, is the new state agent for the Briscoe car in Indiana. The Sterling Motor Co. of this city formerly had the agency. The Keystone company until the change had Kentucky and southern Ohio and now will take in addition Indiana.

S. Zed Downs, Macon, Ga., has acquired the Ford agency for the Macon territory. The agency was formerly owned by McCord and Satterfield and then by R. A. McCord. It is understood that McCord received something like \$125,000 cash in the deal. The agency has a contract calling for the sale of 750 Fords a year.

W. H. McMillin, Spartanburg, S. C., has purchased the interest of W. W. Clement in the automobile firm of McMillin & Clement. In the future the business will be conducted under the name of McMillin Sales Co. W. H. McMillin is the father of E. V. McMillin, junior member of the firm. The concern has the agency for Nash cars.

Madden-Atkinson Automobile Co., Columbus, Ohio, has been chartered with a capital of \$30,000 to deal in automobiles and operate a service station. The company has taken the central Ohio agency for the Columbia. A salesroom and service station will soon be opened. Ira P. Madden is president; Ralph P. Atkinson, vice-president, and Frank H. Constans, secretary-treasurer.

R. Scott Smith, Jr., manager of the Camden, N. J., branch of Neel-Cadillac Co., Philadelphia, was named a director at the recent meeting of the Neel-Cadillac officials. Smith, who is well known in automobile circles, both in this state and New Jersey, joined Neel-Cadillac ranks as salesman Nov. 1, 1915. He has made an excellent record at the Camden branch since taking charge.

The Carls-Franklin Co., Cleveland, Ohio, distributors of the Franklin car in the vicinity, has been reorganized and the capital has been increased from \$50,000 to \$150,000. The corporation is now known as the Carls-Franklin Sales Co., and Clifford S. Carls continues as president. Harry L. Lance has been elected vice-president and general sales manager of the new company.

W. F. O'Brien, Chevrolet branch manager in Newark, has resigned and has become general manager in Newark of the Poertner Motor Car Co., which has headquarters in New York and distributes the National, Scripps-Booth and Durant cars. O'Brien opened the Newark Chevrolet branch seven years ago. He was formerly with Packard. Another addition to the Poertner organization is W. A. Sellon, who was connected with the Chevrolet branch in Brooklyn for several years.

William J. Morgan, "Senator" Morgan of the early days of the automobile, has opened a Ford dealership at 1003 Broad Street, Newark, N. J., in partnership with William C. Ubhaus, under the name of the Morgan Motor Car Co. Morgan for a time was associated with some of the automotive business papers and with the American Motorist, organ of the A. A. A. He was with the Ford Newark branch until it was closed. Ubhaus started with Ford in the Chicago branch and later worked in Long Island and Newark.

A. J. Banta, for years manager of the Chicago branch of the Locomobile Co. and more recently manager of the Maxwell Sales Co. of Chicago, has been appointed general manager of the Clydesdale Motor Truck Co. of Clyde, Ohio. He is familiar with both the sales and manufacturing end of the truck business, having merchandised Riker trucks as Locomobile manager. He formerly was associated with the production department of Maxwell and prior to that was in charge of production at the Premier plant at Indianapolis.

HEAVY PENALTY FOR THEFT IN NEW BILL

Amendment Calls for \$5,000 Fine, 5 Years in Jail, or Both

WASHINGTON, Aug. 16—Senator Brandegee of Connecticut reported from the Senate Committee on Judiciary a bill amending the act of October 29, 1909, known as the "National Motor Vehicle Theft Act." The committee reported it favorably without amendment and undoubtedly it will be enacted at an early date.

The amendment provides that a heavy penalty shall be imposed against automobile thefts. As reported by the Judiciary Committee, the amendment reads as follows:

"That whoever shall transport or cause to be transported in interstate or foreign commerce a motor vehicle with intent to, or in conspiracy to, defraud the owner or any insurer carrying insurance thereon against loss by any hazard shall be punished by a fine of not more than \$5,000 or by imprisonment for not more than five years, or both. That whoever shall receive, conceal, store, barter, sell or dispose of any motor vehicle, moving as, or which is a part of, or which constitutes interstate commerce with intent to, or in conspiracy to, defraud the owner or any insurer carrying insurance thereon against loss by any hazard shall be punished by a fine of not more than \$5,000 or by imprisonment of not more than five years, or both."

REO DEALER HAS PLAN TO BEAT BUS OPPOSITION

LANSING, MICH., Aug. 16—Reo Motor Car Co. has given its sanction to a plan of its retail dealer in this city whereby it is hoped to overcome the opposition of the city council to bus operation. With the way cleared to buses, there would be opened a new avenue to sales which promises at the outset 10 to 15 buses on one route alone.

The dealer has obtained from the council permission to operate a bus on a route not conflicting with street car service for a 30-day period. Fares will be the same as railway rates and careful record will be kept of income and operating expense. At the end of the month results are expected to show the council the advisability of the additional transportation service. With success assured on the initial route, it is planned to proceed to organize new lines.

Pueblo Fund Now \$1,725

ST. LOUIS, MO., Aug. 16—Seventeen hundred and twenty-five dollars have been contributed by local automobile dealers associations and the National Automobile Dealers Association to the N. A. D. A. fund for Pueblo flood relief.

COMING EVENTS

SHOWS

Toronto, Can.	Aug. 27	Canadian National Automobile Show.
Milwaukee	Aug. 29-Sept. 3	Annual Fall Automobile Show at Wisconsin State Fair, Milwaukee Automobile Dealers Association.
Indianapolis	Sept. 5-10	Automobile and Accessory Show in conjunction with Indiana State Fair, conducted by Indianapolis Automotive Trade Ass'n, John B. Orman, Mgr.
Ottawa, Ont.	Sept. 9 to 17	Ottawa Motor Show.
Cincinnati	Oct. 1-8	Fall Automobile Show, Cincinnati Automotive Dealers' Ass'n, Music Hall.
Pittsburgh	Oct. 15-22	Fall Show under auspices of Automotive Association.
New York	Nov. 27-Dec. 3	Automobile Salon, Hotel Commodore.
Chicago	January	Automobile Salon, Drake Hotel.
New York	Jan. 7-13	National Automobile Show, under auspices of National Automobile Chamber of Commerce, Madison Square Garden.
Louisville, Ky.	Feb. 20 to 25	Louisville Automobile Show, auspices Louisville Automobile Dealers' Association.

Chicago	Jan. 28-Feb. 3, 1922	National Automobile Show, under auspices of National Automobile Chamber of Commerce, Coliseum.
Winnipeg	Feb. 6-11, 1922	Automobile Equipment Show, Western Canada Automotive Association.
Santiago, Cuba	March, 1922	Annual Automobile Show.
Rio de Janeiro, Brazil	Sept., 1922	Automotive Exhibition in connection with Brazilian Centenary.

RACES

Uniontown, Pa.	Labor Day	Autumn Classic.
Los Angeles	Nov. 24	Speedway Events.

CONVENTIONS

Chicago	Oct. 12-14	National Implement & Vehicle Association Convention, Congress Hotel.
Chicago	Nov. 14-19	Annual Meeting and Business Exhibit of Automotive Equipment Association.
New York City	Nov. 22-24	Semi-Annual Convention of Factory Service Managers, N. A. C. C., H. R. Cobleigh, Secretary.

The New Car and Truck Description Index

Giving the date and page number on which they appeared

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Collinet (Salon)	Nov. 24, 1920-18
Durant Four	Aug. 10, 1921-30
Duesenberg 8	Nov. 17, 1920-33
Essex (Cabriolet)	Nov. 10, 1920-35
Fergus, 1921	Jan. 12, 1921-23
Forster	Aug. 25, 1920-33
Friend	Jan. 12, 1921-14
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Jackson Four	Jan. 12, 1921-18
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McFarlan Type 147	Oct. 27, 1920-41
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Mercedes (Post War Model)	Oct. 20, 1920-33
Milburn Electric (38D & 38T)	Jan. 12, 1921-21
Moller	Mar. 30, 1921-21

Nash Four	Nov. 10, 1920-34
National (Sextet Phaeton)	Dec. 15, 1920-36
Navarre	Jan. 12, 1921-13
Northway 6	Jan. 12, 1921-13
Oldsmobile Light 8	Mar. 9, 1921-33
Oldsmobile (Model 43-A)	Dec. 15, 1920-33
Packard Single Six	Sept. 29, 1920-32
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Parenti	Jan. 12, 1921-14
Piedmont 4.30	June 29, 1921-30
Pierce-Arrow	Nov. 24, 1920-32
Premocar Special	Feb. 9, 1921-23
Rolls-Royce	Mar. 23, 1921-32
R & V Knight Four	Jan. 12, 1921-16
Scripps-Booth Six	July 13, 1921-32
Sheridan Eight	Oct. 6, 1920-32
Stanwood Six	Sept. 15, 1920-31
Sterling Knight	Feb. 2, 1921-11
Stevens-Duryea	Dec. 1, 1920-30
Wills-Sainte Claire	Mar. 16, 1921-28
Wills Sainte Claire Roadster	July 20, 1921-33

Trucks

Acme (¾ ton)	April 13, 1921-33
Akron Multitruck (1 ton)	Feb. 9, 1921-32
Aries (5 ton)	Jan. 12, 1921-49
Armleder (1 ton)	Nov. 10, 1920-37

Available (1½ ton)	Aug. 4, 1920-32
Avery (1 ton)	Nov. 10, 1920-36
Bessemer (4 ton)	Jan. 12, 1921-30
Bollstrom (4 ton)	Nov. 24, 1920-34
Bridgeport (1½, 2½ & 6 ton)	Jan. 12, 1921-30
Brockway (Highway Express)	Jan. 26, 1921-25
Case (2 ton)	Feb. 16, 1921-16
Clinton (1½, 2½, 3½ & 5 ton)	Jan. 12, 1921-30
Commerce (Mercantile Exp.)	Nov. 10, 1920-37
Cyclone (1½ ton)	Mar. 30, 1921-32
Duplex (2½ ton)	Aug. 18, 1920-31
Federal (5-6 ton)	May 4, 1921-32
Gramm-Bernstein (1 ton)	Nov. 10, 1920-35
G. & J. (2 & 3½ ton)	May 11, 1921-32
G. M. C. (K-15, ¾ ton; K-16, 1 ton; K-41, 3½ ton; K-101, 5 ton)	Mar. 2, 1921-28
Huffman (Models B & C 1 & 2½ tons)	June 29, 1921-30
Inter Harvester (¾ ton)	Feb. 16, 1921-32
Kissell Speed Truck (1 ton)	Mar. 25, 1921-33
Lone Star (1½ ton)	Oct. 27, 1920-30
Lorain (2 ton)	Sept. 1, 1920-30
Mack (double red, axles)	Jan. 5, 1921-33
Moline farm truck (1½ ton)	Nov. 10, 1920-36
Pierce-Arrow (2 ton x 5, 3½ ton, W-2; 5 ton, r-10)	Sept. 8, 1920-30
Rainier (¾ & 5 ton)	Jan. 12, 1921-31
Republic (¾ ton)	July 20, 1921-33
Republic Express, Model 10	Mar. 30, 1921-21
Rumely (1½ ton)	Nov. 10, 1920-36
Service Speed Wagon (1 ton)	Feb. 16, 1921-32
Standard 5-K (5 ton)	Apr. 13, 1921-33
Stoughton (1 ton)	Feb. 23, 1921-33
Stoughton (1½, 2 & 3 ton)	Aug. 25, 1920-33
Transport (3½ ton)	Nov. 3, 1920-31
Waltham (1½ ton)	Aug. 3, 1921-29
Ward La France (5 ton)	Jan. 12, 1921-30
Winther	Feb. 2, 1921-11

75% OF SPACE TAKEN FOR HOOSIER SHOW

INDIANAPOLIS, IND., Aug. 16—More than 75 per cent of the available space for the twenty-third semi-annual automobile show, to be held here the week of Sept. 5, has been taken, according to John B. Orman, manager of the Indianapolis Automotive Trade Association, who has had charge of staging the shows for years.

"The way the dealers are taking space does not jibe with their pessimistic talk

about business," declared Orman. "A large percentage of the dealers are asking for more space than they ever took before. The automobile show is one of the ways I get a line on how business actually is. If business has been good, they hurry and subscribe for space, and if it has been poor, they cut down their requirements and wait until the last minute. This year, not only the requirements have been greater per dealer, but the space is virtually gone, and it is a month until time for the show. They can't tell me about poor business."

EQUIPMENT JOBBERS OF LINCOLN EXPECT GAINS

LINCOLN, NEB., Aug. 16—Automotive equipment jobbers of this city who have been making a survey of business conditions report a slight but steady upward turn in buying and indications from most parts of the State that this will be continued. Farmers have begun to sell the new crop and are also disposing of some of last year's crops held with the hope of higher prices, and they are starting in to spend the money.

Specifications of Current Passenger Car Models

NAME AND MODEL	Engine Make	Cylinders: Bore and Stroke	WB	Tires	2-Pass.	5-Pass.	7-Pass.	Coupe	Sedan	NAME AND MODEL	Engine Make	Cylinders: Bore and Stroke	WB	Tires	2-Pass.	5-Pass.	7-Pass.	Coupe	Sedan
Ace.....G	Guy	6-31x45	123	32x4	\$2975	\$2975	.....	\$3680	\$3680	Maibohm.....B	Falls	6-31x45 1/2	116	32x4	11575	\$1575	11750	\$2395	\$2395
Ace.....H	H.S.	6-39x45	123	32x4	2975	2975	.....	3680	3680	Marmon.....34	Own	6-39x45 1/2	136	32x4 1/2	4185	13985	3985	4875	5275
Ace.....L	H.S.	4-31x45	116	32x4	2260	2260	.....	.....	.....	Maxwell.....25	Own	4-39x45 1/2	109	30x3 1/2	845	845	.....	1445	1545
Allen.....Series 43	Own	4-31x45 1/2	110	32x4	1185	1385	.....	2195	2195	McFarlan.....1921	Own	6-41x45 1/2	140	33x5	6300	6300	6300	7500	7500
Ambassador.....R	Cont.	6-39x45 1/2	136	33x5	.....	14500	\$4500	.....	6500	Mercer.....Series 5	Own	4-39x45 1/2	132	32x4 1/2	4500	4500	*4500	5700	6200
American.....C	H.S.	6-31x45	127	32x4	2195	2275	2350	.....	3150	Merit.....Cont.	Own	6-31x45 1/2	119	32x4	2245	2245	.....	.....	.....
Anderson.....Series 40	Cont.	6-31x45 1/2	120	32x4	2195	1795	1845	2795	2795	Meteor.....R & RR	Own	4-41x45 1/2	129	32x4 1/2	5500	5500	.....	.....	.....
Apperson.....8-21-S	Own	8-31x45	130	34x4 1/2	.....	3000	3250	4500	4500	Metz.....M6	Itut.	6-31x45	120	32x4	1995	1995	.....	2795	2895
Apperson.....Anniversary	Own	8-31x45	130	34x4 1/2	.....	3500	3750	.....	.....	Mitchell.....F-40	Own	6-31x45	120	33x4	1490	1490	.....	2590	2690
Auburn.....6-39	Cont.	6-31x45 1/2	120	32x4	.....	1695	1695	2795	2795	Mitchell.....F-42	Own	6-31x45	127	33x4	.....	.....	1795	.....	.....
Beggs.....20T	Cont.	6-31x45 1/2	120	33x4	1775	1775	.....	2675	2775	Moller.....A	Own	4-29x45	100	27x3 1/2	2000	.....	.....	.....	.....
Bell.....4-32	Cont.	4-31x45	114	31x4	.....	1495	.....	.....	.....	Monroe.....S-9 & 10	Own	4-31x45 1/2	115	32x3 1/2	1295	1295	.....	.....	.....
Bell.....6-50	Cont.	6-31x45	124	32x4	.....	1695	.....	.....	.....	Monroe.....S-11 & 12	Own	4-31x45 1/2	115	33x4	.....	.....	2075	2175	.....
Biddle.....81	B.I.I.	4-39x45 1/2	121	32x4	3475	3475	.....	3975	3975	Moon.....6-48	Cont.	6-31x45 1/2	123	32x4	2085	1985	2485	2985	2685
Birch Super-Four	I.S.	4-31x45	117	33x4	1345	1345	1395	2295	2295	Murray-Mac Six	Own	6-31x45 1/2	128	34x4 1/2	4250	4250	.....	.....	.....
Birch Light Four	I.S.	4-39x45 1/2	108	30x3 1/2	1195	1195	.....	.....	.....	Nash.....681-7	Own	6-31x45	121	33x4	1525	1545	1695	2395	2695
Birch Light Six	I.S.	6-31x45	117	33x4	1595	1595	.....	.....	.....	Nash.....682	Own	6-31x45	127	34x4 1/2	.....	.....	.....	.....	.....
Bour-Davis.....21S	Cont.	6-31x45 1/2	126	33x4 1/2	2385	2385	2385	.....	.....	Nash Four.....41-4	Own	4-31x45	112	32x3 1/2	1175	1195	1735	1935	.....
Brewster.....91	Own	4-4 x 35 1/2	125	32x4 1/2	17000	7000	.....	10500	10500	National Sextet.....BB	Own	6-31x45 1/2	130	32x4 1/2	2990	2990	2990	3990	3990
Briscoe.....4-34	Own	4-39x45	109	31x4	1085	1085	.....	1685	1685	Nelson.....D	Own	4-31x45 1/2	104	32x4	.....	1900	.....	.....	.....
Brook.....S-21 A	Own	2-31x39 1/2	90	28x3	395	395	.....	.....	.....	Noma.....1C	Cont.	6-31x45 1/2	128	32x4 1/2	3000	3200	.....	4450	.....
Buick.....1922-34-35-36-37	Own	4-39x45 1/2	109	31x4	935	975	.....	1475	1650	Northway.....Own	Own	6-31x45 1/2	128	33x5	4200	4200	6000	5600	5400
Buick.....1922-11-5-6-7	Own	6-39x45 1/2	118	33x4 1/2	1495	1525	.....	2135	2435	Norwalk.....430-KS	Lye.	4-31x45	116	32x3 1/2	.....	1035	.....	.....	.....
Buick.....1922-48-9-50	Own	6-39x45 1/2	124	34x4 1/2	.....	.....	1735	2325	2635	Oakland.....34-C	Own	6-21x45 1/2	115	32x4	1095	1145	.....	1625	1725
Bush.....E.C.A	Lye.	4-31x45	116	33x4	.....	1195	.....	.....	.....	Ogren.....6-60	Own	6-31x45 1/2	134	33x5	13850	3750	3900	5000	5400
Bush.....E.C.6	Own	6-31x45	116	33x4	.....	1345	.....	1750	1850	Oldsmobile.....43-A	Own	4-31x45 1/2	115	32x4	1325	1345	.....	1895	2100
Cadillac.....59	Own	8-31x45 1/2	125	34x4 1/2	3790	3790	3940	.....	5190	Oldsmobile.....37A	Own	6-21x45 1/2	112	32x4	1450	1450	.....	2145	2145
Carroll.....C	Roeh.	6-31x45	128	32x4 1/2	3185	3185	.....	.....	.....	Oldsmobile.....46	Own	8-21x45 1/2	122	33x4 1/2	.....	1825	1875	.....	2775
Case.....V	Cont.	6-31x45 1/2	126	34x4 1/2	2250	2250	2900	3285	3285	Oldsmobile.....47	Own	8-21x45 1/2	115	32x4	.....	1725	.....	2225	2425
Chalmers.....6-30	Own	6-31x45 1/2	117	32x4	1495	1545	.....	2295	2445	Overland.....4	Own	4-39x45	100	30x3 1/2	695	695	.....	1000	1275
Chalmers.....6-30	Own	6-31x45 1/2	122	33x4 1/2	.....	.....	1795	.....	.....	Packard.....Single-Six	Own	6-39x45 1/2	116	33x4 1/2	2975	2975	.....	3750	3975
Champion.....Tourist	Lye.	4-31x45	113	32x3 1/2	.....	1095	.....	.....	.....	Packard.....Twin Six	Own	12-8 x 5	136	35x5	4850	4850	4850	6600	6800
Champion.....Special	H.S.	4-31x45	118	32x4	1395	1395	.....	.....	.....	Paige.....6-42	Own	6-31x45	119	32x4	1635	1635	.....	2470	2570
Chandler.....Six	Own	6-31x45	123	33x4	1785	1785	2785	2885	2885	Paige.....6-66	Own	6-31x45	131	33x4 1/2	2975	3295	2875	3755	3830
Chevrolet.....490	Own	4-31x4	102	30x3 1/2	625	625	.....	975	975	Pan American E & F-655	H.S.	6-31x45	121	33x4	2000	2000	2100	.....	.....
Chevrolet.....FB	Own	4-31x45 1/2	110	33x4	975	975	.....	1575	1575	Parenti.....1921	Own	8-29x45 1/2	125	32x4	.....	2000	.....	3000	.....
Cleveland.....40	Own	6-3 x 45 1/2	112	32x4	1295	1295	.....	2195	2295	Patersen.....650	Own	6-31x45 1/2	120	33x4	.....	1595	1625	2895	2895
Climber Four.....H.S.	Own	4-31x45	115	33x4	1450	1385	.....	.....	.....	Peelless.....56-S-7	Own	8-31x45	125	34x4 1/2	.....	2290	2990	3680	3950
Climber Six.....S.H.S.	Own	6-31x45	125 1/2	32x4 1/2	2250	2250	.....	.....	.....	Peters.....Own	Own	2-31x39 1/2	90	28x3	385	.....	.....	.....	.....
Cole.....870	North.	8-31x45 1/2	127	33x5	2550	2695	2795	3695	3995	Piedmont.....4-30	Lye.	4-31x45	116	32x3 1/2	.....	1270	.....	.....	.....
Columbia Challenger	Rut.	6-31x45	115	32x4	.....	1195	.....	1995	1995	Piedmont.....6-40	Cont.	6-31x45 1/2	122	32x4	.....	1495	.....	.....	.....
Columbia.....D-C & CS	Cont.	6-31x45	115	32x4	1475	1475	.....	2295	2350	Pierce-Arrow.....Own	Own	6-4 x 35 1/2	138	33x5	8000	17500	7500	8500	9000
Comet.....C-53	Cont.	6-31x45 1/2	125	33x4 1/2	.....	2350	2450	.....	3650	Pilot.....6-45	Tector	6-31x45	120	32x4	1945	1895	.....	.....	.....
Commonwealth.....11	H.S.	4-31x45	117	32x4	.....	1395	.....	2465	2465	Pilot.....6-50	H.S.	6-31x45	126	32x4 1/2	2285	2285	2335	3550	3400
Crawford.....21-40	Cont.	6-31x45 1/2	122 1/2	32x4	3000	3000	.....	4500	4500	Porter.....40	Own	4-48x45 1/2	142	35x5	6750	Chassi s Price	.....	.....	.....
Crow-Elkhart.....L61-65	Lye.	4-31x45	117	32x3 1/2	1295	1295	.....	.....	.....	Premier.....6-D	Own	6-39x45 1/2	126 1/2	33x5	3790	13690	3890	4690	5190
Crow-Elkhart.....S61-65	H.S.	6-31x45	117	33x4	1545	1545	.....	2395	2395	Premocar.....6-40 A	Falls.	6-39x45 1/2	117	33x4	1295	1295	.....	.....	.....
Daniels.....D-19	Own	8-31x45 1/2	132	34x4 1/2	15350	15350	5350	6250	6950	Raleigh.....A-6-60	H.S.	6-31x45	122	32x4 1/2	2250	2250	.....	3100	3200
Davis.....61-67	Cont.	6-31x45 1/2	120	33x4	11995	11995	2150	2795	2795	R & V Knight.....R	Own	4-39x45	116	32x4	.....	2150	.....	2850	2950
Dispatch.....Wisc.	Own	4-31x45	120	34x4	1250	1350	.....	1525	1575	Reo.....T-6	Own	6-31x45 1/2	127	32x4 1/2	3350	13350	3350	4000	4200
Dixie Flyer.....H-S-10	Own	4-31x45	112	32x4	1445	1445	.....	2295	2345	Reo.....T-6	Own	6-31x45	120	33x4	1650	1650	.....	2700	2750
Dodge Brothers.....Own	Own	4-31x45 1/2	114	32x4	935	935	.....	1585	1785	Rever.....C Dues.	Own	4-45x45	131	32x4 1/2	4850	4650	14650	.....	6500
Dorris.....6-39	Own	6-4 x 35	132	33x5	.....	14785	4785	5800	6690	Roamer.....6-54-F	Cont.	6-31x45 1/2	128	32x4 1/2	3150	3150	3250	3985	4100
Dort.....17-12	D-Ly	4-31x45	108	31x4	985	985	.....	1535	1685	Roamer.....4-75-E	Dues.	4-41x45	128	32x4 1/2	4150	3985	.....	.....	.....
Duesenberg.....Own	Own	8-21x45	128 1/2	33x5	5600	5600	.....	7500	7500	Rolls-Royce.....Own	U.S.	6-41x45 1/2	143 1/2	33x5	U.S. Chassi s Price	11750	.....	.....	.....
Dupont.....A	Own	4-31x45 1/2	124	32x4 1/2	3400	3400	.....	4900	4900	Romer.....Cont.	Own	6-31x45 1/2	120	32x4	2000	2000	2100	2450	2750
Durant.....A-22	Cont.	4-39x45 1/2	109	31x4	.....	890	.....	.....	.....	Saxon.....125	Own	4-31x45	112	32x4	1545	1495	.....	2295	2295
Elcar.....K-1	Lye.	4-31x45	117	33x4	1195	1195	.....	.....	.....	Sayers Six.....DP	Cont.	6-31x45 1/2	118	33x4	2145	1945	.....	2905	2905
Elcar.....7-R	Own	6-31x45 1/2	117	33x4	1595	1595	1195	2395	2495	Scripps-Booth.....B-39-42	North.	6-21x45 1/2	115	32x4	1275	1295	.....	1950	2140
Elgin.....K-1	Falls.	6-31x45	118	33x4	1595	1595	1595	2395	2395	Scripps-Booth.....F-43-46	Cont.	6-31x45 1/2	115	32x4	1470	1490	.....	2530	2375
Essex.....Own	Own	4-39x45	108 1/2	32x4	1445	1445	.....	1950	2300	Seneca.....L & O	LeR.	4-39x45 1/2	108	30x3 1/2	1045	1045	.....	.....	.....
Fergus.....S-5-21	Own	6-31x45	126	32x4 1/2	.....	Chassi s Price	8500	.....	.....	Severin.....Six	Cont.	6-31x45 1/2	122 1/2	33x5	2550	2550	2550	3250	3350
Ferris.....Cont.	Cont.	6-31x45 1/2	130	32x4 1/2	3350	.....	2595	.....	.....	Sheridan.....4	North.	4-31x45 1/2	116	33x4	1485	1485	.....	2060	2360
Ford.....T	Own	4-31x4	100	30x3 1/2	*370	1415	.....	695	780	Skelton.....35	Lye.	4-31x45	112	32x3 1/2	995	995	.....	.....	.....
Franklin.....9-B	Own	4-31x4	115	32x4	2550	2550	.....	3650	3650	Southern Six.....660-2	H.S.	6-31x45	12						

Specifications of Current Motor Truck Models

NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive
				Front	Rear						Front	Rear						Front	Rear	
Acadon, R	1	\$1650	3 1/2 x 5	34x5 1/2	34x5 1/2	W	Concord, BX	2 1/2	\$3600	4 1/2 x 5 1/2	36x4	36x8	W	Gary, I	1 1/2	\$2550	4 1/2 x 5 1/2	36x3 1/2	36x5	W
Acadon, RB	1 1/2	2260	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Cook, 41	2	3000	4 1/2 x 5 1/2	36x4	36x7	W	Gary, J	2 1/2	3150	4 1/2 x 5 1/2	36x4	36x7	W
Acadon, H	2 1/2	3295	4 1/2 x 5 1/2	36x4	36x4 1/2	W	Corbett, E	1	2200	3 1/2 x 5	34x3 1/2	34x5	W	Gary, K	3 1/2	4050	4 1/2 x 5 1/2	36x5	40x5 1/2	W
Acadon, L	3 1/2	4295	4 1/2 x 5 1/2	36x4	36x5 1/2	W	Corbett, D	1 1/2	2600	3 1/2 x 5	36x3 1/2	36x5	W	Gary, M	5	5150	5 x 6 1/2	36x6	40x6 1/2	W
Acadon, M	5	5250	5 x 6 1/2	36x6	40x12	W	Corbett, C	2	3150	4 1/2 x 5 1/2	36x3 1/2	36x7	W	Gearis M	1 1/2	3100	4 1/2 x 5 1/2	36x3 1/2	36x7	W
Ace, C	1 1/2	2295	3 1/2 x 5 1/2	34x3 1/2	34x5	W	Corbett, A	2 1/2	3300	4 1/2 x 5 1/2	36x4	36x7	W	Gearis K	2 1/2	3500	4 1/2 x 5 1/2	36x4	36x8	W
Ace, A	2 1/2	2795	4 1/2 x 5 1/2	36x4	36x7	W	Cyclone A	3 1/2	4100	4 1/2 x 5 1/2	36x5	36x10	W	Gearis	3 1/2	4500	4 1/2 x 5 1/2	36x5	40x12	W
Acme, G	1	.....	3 1/2 x 5	34x5 1/2	34x5 1/2	W	Cyclone AA	5	5000	4 1/2 x 5 1/2	36x6	40x6 1/2	W	Giant, 15-A	1 1/2	2250	3 1/2 x 5	34x3 1/2	34x5	W
Acme, B	1 1/2	.....	3 1/2 x 5	34x3 1/2	34x5	W	Dart, S	1 1/2	2635 1/2	3 1/2 x 5 1/2	34x5 1/2	34x5	W	Giant, 16	2	2050	4 1/2 x 5 1/2	36x4	36x7	W
Acme, F	1 1/2	.....	3 1/2 x 5	34x3 1/2	34x5	W	Dart, M	2 1/2	.....	3 1/2 x 5 1/2	34x3 1/2	34x6	W	Giant, 17	3 1/2	4150	4 1/2 x 5 1/2	36x5	36x5 1/2	W
Acme, A	2	.....	4 1/2 x 5 1/2	36x4	36x7	W	Dart, W	3 1/2	.....	4 1/2 x 5 1/2	36x5	36x10	W	Globe D-29	1 1/2	1495	3 1/2 x 5	33x4 1/2	33x4 1/2	B
Acme, C	3 1/2	.....	4 1/2 x 5 1/2	36x5	40x10	W	Day-Elder, A	1	2225	3 1/2 x 5	34x3 1/2	34x4	W	Globe	1	1495	3 1/2 x 5	33x5	33x5	B
Acme, E	5	.....	4 1/2 x 5 1/2	36x6	40x12	W	Day-Elder, B	1 1/2	2300	3 1/2 x 5	34x3 1/2	34x5	W	Golden West, GH	3 1/2	5000	4 1/2 x 5 1/2	36x6	36x7	W
Alk'n Multi-Trk 20	1	1995	4 1/2 x 5 1/2	34x5	34x5	B	Day-Elder, D	2	2900	4 1/2 x 5 1/2	36x4	36x7	W	Golden West, G	3 1/2	4500	4 1/2 x 5 1/2	36x6	36x6	W
Alk-Power, C	3 1/2	5800	4 1/2 x 5 1/2	36x7	36x10	W	Day-Elder, C	2 1/2	2750	4 1/2 x 5 1/2	36x4	36x7	W	Golden West, H	3 1/2	5000	4 1/2 x 5 1/2	36x6	36x6	W
Alk-American, B-1	1	1795	3 1/2 x 5	32x4	32x4	W	Day-Elder, F	3 1/2	3700	4 1/2 x 5 1/2	36x5	36x5 1/2	W	Golden West, T	4	5500	4 1/2 x 5 1/2	36x6	36x6	W
Alk-American, C-1	1 1/2	2195	3 1/2 x 5	34x4	34x5	W	Day-Elder, E	5	4875	4 1/2 x 5 1/2	36x5	36x6 1/2	W	Golden West, K	7	6000	4 1/2 x 5 1/2	36x6	36x6	W
American, 25	2 1/2	3350	4 x 6	36x4	36x4 1/2	W	Dearborn, P	1 1/2	2180	3 1/2 x 5 1/2	34x4	34x5	W	Golden West, HA	7	6000	4 1/2 x 5 1/2	36x6	36x10	W
American, 40	4	4275	4 1/2 x 6	36x5	36x5 1/2	W	Dearborn, 48	3	2580	3 1/2 x 5 1/2	35x5 1/2	34x7 1/2	W	Gove, A-1	2 1/2	2495	4 1/2 x 5 1/2	36x4	36x7	I
Apez, G	1	1675	3 1/2 x 5	33x5 1/2	33x5 1/2	W	Defiance, G	1	1975	3 1/2 x 5	33x5 1/2	33x5 1/2	W	Graham Bros. A	1 1/2	1495	3 1/2 x 5	33x5 1/2	33x5 1/2	B
Apez, D	1 1/2	1915	3 1/2 x 5 1/2	34x3 1/2	34x4	W	Defiance, E	1 1/2	2550	3 1/2 x 5	33x5 1/2	33x5 1/2	W	Graham Bros. B	1 1/2	2050	3 1/2 x 5	33x5 1/2	33x5 1/2	I
Apez, E	2 1/2	2695	4 1/2 x 5 1/2	36x4	36x7	W	Defiance, D	3	2750	3 1/2 x 5	33x5 1/2	33x7 1/2	W	Graham Bros. C	1 1/2	2725	3 1/2 x 5	33x5 1/2	33x5 1/2	I
Apez, F	3 1/2	3975	4 1/2 x 5 1/2	36x5	36x10	W	DeKalb, E2 1/2	2	2600	4 1/2 x 5 1/2	36x4	36x6	W	Graham Bros. D	2	3175	4 1/2 x 5 1/2	36x4	36x7	W
Armsider, 20	1	.....	3 1/2 x 5 1/2	34x3 1/2	34x5	W	DeKalb, E2 1/2	2 1/2	2250	4 1/2 x 5 1/2	34x3 1/2	34x5	W	Graham Bros. E	2 1/2	2575	4 1/2 x 5 1/2	36x4	36x4 1/2	W
Armsider, HW	2 1/2	.....	4 1/2 x 5 1/2	36x4	36x7	W	DeKalb, E2 1/2	1 1/2	2600	3 1/2 x 5	34x3 1/2	34x6	W	Graham Bros. F	3 1/2	4375	4 1/2 x 5 1/2	36x5	40x5 1/2	W
Armsider, KW	3 1/2	.....	4 1/2 x 5 1/2	36x5	36x5 1/2	W	DeKalb, E2 1/2	1 1/2	3300	4 1/2 x 5 1/2	36x4	36x7	W	Graham Bros. G	5	6275	4 1/2 x 5 1/2	36x6	40x6 1/2	W
Atco, B	1 1/2	.....	3 1/2 x 5 1/2	34x5 1/2	36x6	W	DeKalb, E2 1/2	3	4250	4 1/2 x 5 1/2	36x4	36x10	W	Hahn, J4	1 1/2	.....	3 1/2 x 5	34x5	34x5	W
Atco, B1	1 1/2	.....	3 1/2 x 5 1/2	34x5 1/2	36x6	W	DeKalb, E2 1/2	4	4800	4 1/2 x 5 1/2	36x5	36x12	W	Hahn, CD	2 1/2	.....	4 1/2 x 5 1/2	36x4	36x6	W
Atco, A	2 1/2	.....	4 1/2 x 5 1/2	36x4	36x8	W	DeKalb, E2 1/2	1	1625	3 1/2 x 5	35x5	36x6	W	Hahn, EE	2 1/2	.....	4 1/2 x 5 1/2	36x4	36x8	W
Atlas, MD	1	.....	3 1/2 x 5	32x4 1/2	32x4 1/2	W	DeKalb, E2 1/2	1 1/2	2300	3 1/2 x 5	35x5 1/2	35x7 1/2	W	Hahn, F	2 1/2	.....	4 1/2 x 5 1/2	36x5	36x10	W
Attorbury, 20R	1 1/2	2775	3 1/2 x 5	34x3 1/2	34x5	W	Denby, 12	3 1/2	2600	3 1/2 x 5	36x3 1/2	36x6	W	Hahn, EF	5	.....	4 1/2 x 5	36x6	40x12	W
Attorbury, 7CX	2 1/2	3375	4 1/2 x 5 1/2	36x4	36x4 1/2	W	Denby, 33	1	3300	4 1/2 x 5 1/2	36x4	36x7	W	Hal Fur, E	1	2350	4 1/2 x 5	35x5 1/2	35x5 1/2	W
Attorbury, 7D	3 1/2	4175	4 1/2 x 5 1/2	36x5	40x5 1/2	W	Denby, 27	2	4200	4 1/2 x 5 1/2	36x5	36x5 1/2	W	Hal Fur, B	2 1/2	3250	4 1/2 x 5 1/2	35x5	38x7	W
Attorbury, 8E	5	5575	4 1/2 x 5 1/2	36x6	40x6 1/2	W	Denby, 27	3	4800	4 1/2 x 5 1/2	36x6	36x5 1/2	W	Hal Fur, F	3 1/2	4250	4 1/2 x 5 1/2	36x6	40x10 1/2	W
Autocar, 21UF	1 1/2	2300	3 1/2 x 5	34x4	34x5	D	Denby, 210	5	4850	4 1/2 x 5 1/2	36x6	40x6 1/2	W	Hall	1 1/2	8100	3 1/2 x 5	34x5 1/2	38x7	W
Autocar, 21UG	1 1/2	2400	3 1/2 x 5	34x4	34x5	D	Dependable, A	3 1/2	1850	3 1/2 x 5	34x5	36x6	W	Hall	2 1/2	3275	3 1/2 x 5	36x4	36x6	W
Autocar, 26-S	.....	4350	4 1/2 x 5 1/2	34x5	36x10	D	Dependable, C	1 1/2	2250	3 1/2 x 5	34x3 1/2	34x5	W	Hall	3 1/2	4100	4 1/2 x 5 1/2	36x5	36x5 1/2	W
Available, H1 1/2	1 1/2	2750	4 1/2 x 5 1/2	36x4	36x5	W	Dependable, D	2	2850	4 1/2 x 5 1/2	34x5	36x6	W	Hall	5	5100	4 1/2 x 5 1/2	36x5	40x6 1/2	W
Available, H2 1/2	2 1/2	3475	4 1/2 x 5 1/2	36x5	36x8	W	Dependable, E	2 1/2	2950	4 1/2 x 5 1/2	36x5	36x7	W	Hall	7	5100	4 1/2 x 5 1/2	36x5	40x6 1/2	C
Available, H3 1/2	3 1/2	4475	4 1/2 x 5 1/2	36x6	40x5 1/2	W	Dependable, G	3 1/2	3550	4 1/2 x 5 1/2	36x6	38x7	W	Harvey, WEA	1 1/2	2550	4 1/2 x 5 1/2	34x3 1/2	34x5	W
Available, HS	5	5375	4 1/2 x 5 1/2	36x6	40x12	W	Diamond-T, O	2500	2500	3 1/2 x 5 1/2	34x5 1/2	36x6 1/2	W	Harvey, WFA	2 1/2	3300	4 1/2 x 5 1/2	36x4	36x7	W
Available, H7	7	6000	5 x 6	36x6	40x14	B	Diamond-T, FS	1 1/2	2960	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Harvey, WHA	2 1/2	4300	4 1/2 x 5 1/2	36x5	36x5 1/2	W
Avery	1	.....	3 x 4	34x5 1/2	34x5 1/2	W	Diamond-T, T	1 1/2	2850	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Harvey, WKA	5	5200	4 1/2 x 5 1/2	36x6	40x6 1/2	W
Beck, A. Jr.	1	1800	3 1/2 x 5	34x3 1/2	34x4	W	Diamond-T, U	2	3285	4 1/2 x 5 1/2	36x4	36x7	W	Hawkeye, K	1 1/2	1850	3 1/2 x 5 1/2	34x3 1/2	34x5	W
Beck, C	2	2550	4 1/2 x 5 1/2	36x4	36x6	W	Diamond-T, V	3 1/2	4675	4 1/2 x 5 1/2	36x5	36x5 1/2	W	Hawkeye, M	2	2650	4 1/2 x 5 1/2	36x4	36x6	W
Beck, M	1	1650	3 1/2 x 5	33x5	33x5 1/2	W	Diamond-T, EL	5	5400	4 1/2 x 5 1/2	36									

Specifications of Current Motor Truck Models—Continued

NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive
				Front	Rear						Front	Rear						Front	Rear	
Kelly-S, K-45	4	\$4550	4 1/2 x 6 1/2	36x5	40x6 1/2	C	Ogden, A1	1 1/2	\$2550	3 1/2 x 5	36x3 1/2	36x5	W	Service, 71	3 1/2	\$285	4 1/2 x 5 1/2	36x5	36x5 1/2	W
Kelly-S, K-50	4	4900	4 1/2 x 6 1/2	36x5	40x6 1/2	C	Ogden, E	2 1/2	3250	4 1/2 x 5 1/2	36x4	36x7	W	Service, 76	3 1/2	4485	4 1/2 x 5 1/2	36x5	36x5 1/2	W
Kelly-S, K-60	6	5100	4 1/2 x 6 1/2	36x5	40x7 1/2	C	Old Hickory, W	1	2175	3 1/2 x 5	36x3 1/2	36x4 1/2	W	Service, 101	5	5275	4 1/2 x 6	36x6	40x6 1/2	W
Keystone, 40	2	2450	3 1/2 x 5 1/2	34x5 1/2	38x7 1/2	I	Old Reliable, A	1 1/2	2350	4 x 5	34x4	36x6	W	Signal, NF	1	2175	4 1/2 x 5	34x5 1/2	36x6 1/2	W
Kimball, AB	2	3675	4 x 6	36x4	36x7	W	Old Reliable, B	2 1/2	3500	4 1/2 x 6	34x4	36x4d	W	Signal, H	1 1/2	2925	4 1/2 x 5 1/2	34x4	36x6	W
Kimball, AC	2 1/2	3975	4 1/2 x 6	36x4	36x8	W	Old Reliable, C	3 1/2	4250	4 1/2 x 6	36x5	36x5d	W	Signal, J	2 1/2	3275	4 1/2 x 5 1/2	34x4	36x8	W
Kimball, AK	3	4500	4 1/2 x 6	36x4	36x10	W	Old Reliable, D	5	5250	4 1/2 x 6	36x6	40x6d	W	Signal, M	3 1/2	4275	4 1/2 x 5 1/2	36x5	40x5 1/2	W
Kimball, AE	4	5000	4 1/2 x 6	36x5	40x12	W	Old Reliable, KLM	7	6000	4 1/2 x 6	36x6	40x7d	C	Signal, R	5	5300	4 1/2 x 6	36x6	40x6 1/2	W
Kimball, AF	5	5975	5 x 6	36x6	40x7d	W	Oldsmobile Econ.	1	1250	3 1/2 x 5 1/2	35x5 1/2	35x5 1/2	I	Southern, 10	1	2 91	3 1/2 x 5	34x3 1/2	34x4	W
Kissel, Express	1	1985 1/2	3 1/2 x 5 1/2	34x5 1/2	34x5 1/2	W	Olympic, A	2 1/2	3500	4 1/2 x 5 1/2	36x4	36x7	W	Southern, 15	1 1/2	2503	3 1/2 x 5 1/2	36x6 1/2	34x4	W
Kissel, Utility	1 1/2	2775	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Oneida, A-9	1 1/2	2350	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Southern, 20	2	2900	4 1/2 x 5 1/2	36x6 1/2	40x8 1/2	W
Kissel, Freight	2 1/2	3475	4 1/2 x 5 1/2	36x4	36x7	W	Oneida, B-9	1 1/2	2915	4 x 5 1/2	36x4	36x7	W	Standard, 1-K	1-1 1/2	1950	3 1/2 x 5	34x3 1/2	34x5	W
Kissel, H. D.	4	4475	4 1/2 x 5 1/2	36x5	36x5d	W	Oneida, C-9	2 1/2	3390	4 x 5 1/2	36x4	36x7	W	Standard, 76	2 1/2-3	3100	4 1/2 x 5 1/2	36x4	36x7	W
Kleber, AA	1	2600	4 1/2 x 5 1/2	34x3 1/2	34x5	W	Oneida, D-9	3 1/2	4345	4 1/2 x 5 1/2	36x5	36x10	W	Standard, 66	3 1/2-4	4000	4 1/2 x 5 1/2	36x5	36x10	W
Kleber, A	1 1/2	3100	4 1/2 x 5 1/2	36x3 1/2	36x6	W	Oneida, E-9	5	5460	4 1/2 x 5 1/2	36x6	40x12	W	Standard, 5-K	5-6	5250	4 1/2 x 6	36x6	40x12	W
Kleber, BB	2	3600	4 1/2 x 5 1/2	36x4	36x7	W	Orleans, A	1 1/2	2750	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Sterling, 1 1/2	1 1/2	3200	4 x 5 1/2	36x3 1/2	36x6	W
Kleber, B	2 1/2	4200	4 1/2 x 5 1/2	36x5	36x8	W	Orleans, B	2 1/2	3250	4 1/2 x 5 1/2	36x4	36x7	W	Sterling, 2	2	3500	4 x 5 1/2	36x4	36x6	W
Kleber, C	3 1/2	4900	4 1/2 x 5 1/2	36x5	36x5d	W	Orleans, C	3 1/2	3750	4 1/2 x 5 1/2	36x4 1/2	36x8	W	Sterling, 2 1/2	2 1/2	3650	4 1/2 x 5 1/2	36x4	36x6 1/2	W
Kleber, D	5	5600	5 x 6 1/2	36x6	40x12	W	Orleans, D	5	4250	4 1/2 x 5 1/2	36x6	40x8	W	Sterling, 3 1/2	3 1/2	4650	4 1/2 x 5 1/2	36x5	40x5 1/2	W
Kooler, D	1 1/2	2100	3 1/2 x 5	34x3 1/2	34x5	W	Oshkosh, A	2	3750	3 1/2 x 5	36x6 1/2	36x7	W	Sterling, 3-W	5	5500	5 x 6 1/2	36x6	40x6 1/2	W
Kooler, M	2 1/2	2100	4 x 5 1/2	36x4	36x7	W	Oshkosh, AA	2 1/2	3850	3 1/2 x 5	36x6 1/2	36x7	W	Sterling, 5-C	5	6000	5 x 6 1/2	36x6	40x6 1/2	C
Kooler, MCS	2 1/2	2100	4 x 5 1/2	36x4	36x7	W	Oshkosh, B	2 1/2	4300	4 x 5 1/2	38x7 1/2	38x7 1/2	W	Sterling, 7 1/2	7 1/2	6500	5 x 6 1/2	36x6	40x7d	C
Kooler, F	3 1/2	2100	4 1/2 x 5 1/2	36x5	36x10	W	Oshkosh, BB	2 1/2	4300	4 x 5 1/2	38x7 1/2	38x7 1/2	W	Stewart, 11	1 1/2	1350	3 1/2 x 4 1/2	32x4 1/2	32x4 1/2	I
Kooler, MT, Trac.	3 1/2	2100	4 x 5 1/2	36x4	36x7	W	Packard, EC	2 1/2	3500	4 1/2 x 5 1/2	36x4	36x7	W	Stewart, 15	1	1875	3 1/2 x 5	35x5 1/2	35x5 1/2	I
L.M.C., 2-20	2 1/2	2540	4 1/2 x 5 1/2	36x4	36x4d	I	Packard, ED	2 1/2	4100	4 1/2 x 5 1/2	36x5	36x5d	W	Stewart, 9	1 1/2	2200	3 1/2 x 5	34x3 1/2	34x5	I
Lange, B	2 1/2	3350	4 1/2 x 5 1/2	36x4	36x6	C	Packard, EF	2 1/2	4500	5 x 5 1/2	36x6 1/2	40x6d	W	Stewart, 7	2	2900	4 1/2 x 5 1/2	34x4	34x7	I
Larrabee, U	1 1/2	2400	3 1/2 x 5	34x3 1/2	34x5	W	Packard, EX	2 1/2	4000	4 1/2 x 5 1/2	36x6 1/2	40x8 1/2	W	Stewart, 7-X	2 1/2	2950	4 1/2 x 5 1/2	34x4	34x7	I
Larrabee, SK	2 1/2	3200	4 1/2 x 5 1/2	36x4	36x7	W	Paige, 52-19	1 1/2	2890	4 x 5 1/2	34x3 1/2	34x6	W	Stewart, 10	3 1/2	3850	4 1/2 x 5 1/2	36x5	36x5d	I
Larrabee, FL	3 1/2	4000	4 1/2 x 5 1/2	36x5	36x5d	W	Paige, 54-20	2 1/2	3400	4 1/2 x 5 1/2	34x4	34x4d	W	Stewart, 10-X	3 1/2	3850	4 1/2 x 5 1/2	36x5	36x5d	I
Larrabee, FW	5	4900	4 1/2 x 6	36x6	40x6d	W	Paige, 51-18	3 1/2	4285	4 1/2 x 5 1/2	36x5	36x5d	W	Stoughton, A	1	1995	3 1/2 x 5	34x4 1/2	35x5 1/2	W
Lia, L	1	2350	3 1/2 x 5 1/2	35x5 1/2	35x5 1/2	W	Parker, F20	2	3500	4 x 6	34x4	36x4d	W	Stoughton, B	1 1/2	2350	3 1/2 x 5 1/2	36x3 1/2	36x5	W
Loadingsham, C	1	2100	3 1/2 x 5	35x5 1/2	35x5 1/2	W	Parker, J20	3 1/2	4400	4 1/2 x 6	36x5	40x5d	W	Stoughton, D	2	2900	4 x 5 1/2	36x4	36x7	W
Loadingsham, W	1 1/2	2700	3 1/2 x 5 1/2	34x3 1/2	34x5	W	Parker, M20	5	5500	4 1/2 x 6	36x6	40x6d	W	Stoughton, F	3	3600	4 1/2 x 5 1/2	36x5 1/2	36x5 1/2	W
Loadingsham, W	2-2 1/2	3150	4 1/2 x 5 1/2	36x4	36x7	W	Patriot, Reverse	1 1/2	1755	3 1/2 x 5	35x5 1/2	35x5 1/2	W	Sullivan, E	2	3350	4 1/2 x 5 1/2	36x4	36x7	W
Macca, L	1 1/2	2925	4 1/2 x 5 1/2	36x4	36x6	W	Patriot, Lincoln	1 1/2	2450	4 x 5 1/2	34x3 1/2	34x5	W	Sullivan, H	3 1/2	4650	4 1/2 x 6	36x5	36x5 1/2	W
Macca, H-2	2 1/2	3650	4 1/2 x 5 1/2	36x4	36x4d	W	Patriot, Washgton	1 1/2	2450	4 1/2 x 5 1/2	36x4	36x7	W	Superior, D	1	1650	3 1/2 x 5	34x4 1/2	34x4	I
Macca, M-2	3 1/2	4500	4 1/2 x 6	36x5	36x5d	W	Piedmont, 4-30	1 1/2	1685	3 1/2 x 5	34x4 1/2	34x4 1/2	W	Superior, E	2	2600	4 1/2 x 5 1/2	36x4	36x6	I
Macca, G	5	5500	4 1/2 x 6	36x5	40x6d	W	Pierce-Arrow	2	2300	4 x 5 1/2	36x4	36x4d	W	Super Truck, 50	2 1/2	3300	4 x 6	36x4	36x8	W
MacDonald, A	7 1/2	5750	4 1/2 x 6	40x7	40x14	I	Pierce-Arrow	3 1/2	4350	4 1/2 x 6	36x5	36x5d	W	Super Truck, 70	3 1/2	4300	4 1/2 x 6	36x5	40x5 1/2	W
Mac, AB D.R.	1 1/2	3450	4 x 5	36x4	36x3 1/2d	D	Pioneer, 50	1	1550	3 1/2 x 4 1/2	32x4 1/2	32x4 1/2	W	Super Truck, 100	5	5300	4 1/2 x 6	36x5	40x12	W
Mack, AB	2 1/2	3400	4 x 5	36x4	36x4d	C	Pittsburgh, B 21	2 1/2-3	3800	4 1/2 x 5 1/2	36x5	36x7	W	Super Truck, 150	7 1/2	6300	5 x 6	36x6	40x7 1/2	W
Mack, AB Chain	1 1/2	3000	4 x 5	36x4	36x4 1/2	C	Pony	4	400	2 1/2 x 4	28x3 1/2	28x3 1/2	C	Texas, A35	1 1/2	1095	3 1/2 x 5	33x4	33x4	I
Mack, AB Chain	2	3300	4 x 5	36x4	36x4d	C	Pow, F	1 1/2	400	3 1/2 x 5 1/2	36x6	36x6	W	Texas, TK39	1 1/2	1550	3 1/2 x 5	36x6	38x7	W
Mack, AB D.R.	2	3750	4 x 5	36x4	36x4d	C	Pow, C	1 1/2	400	3 1/2 x 5 1/2	36x6	36x6	W	Tiffin, CW	1 1/2	2895	4 1/2 x 5 1/2	36x3 1/2	36x5 1/2	W
Mack, AC Chain	3 1/2	4950	5 x 6	36x5	40x5d	C	Premcar, E-143	1 1/2	2475	3 1/2 x 5	36x6 1/2	36x10	W	Tiffin, MW	2 1/2	3590	4 1/2 x 5 1/2	36x4	36x3 1/2	W
Mack, AC Chain	5	5500	5 x 6	36x6	40x6d	C	Ramier, R-11	1 1/2	2150	3 1/2 x 5	35x5 1/2	35x5 1/2	W	Tiffin, P50	3 1/2	4760	4 1/2 x 5 1/2	36x5	40x5 1/2	W
Mack, AC Chain	6 1/2																			

Specifications of Current Motor Truck Models—Continued

NAME AND MODEL	Tons Capacity	Chassis Price	Base and Stroke	TIRES Front Rear	Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Base and Stroke	TIRES Front Rear	Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Base and Stroke	TIRES Front Rear	Final Drive
Ward-LaF., 5A	5	\$5590	5 x 8 1/2	36x6 36x6	W	Wichita, O	3 1/2	\$4000	4 1/2 x 6	36x5 36x5 1/2	W	Winther, 430	1 1/2	\$2850	3 1/2 x 5	32x4 32x4	I
Watson, E	1	1865	3 1/2 x 5 1/2	34x4 34x4 1/2	W	Wichita, S	5	5000	4 1/2 x 6	36x6 40x6 1/2	W	Winther, 39	1 1/2	2450	3 1/2 x 5	32x4 32x4	I
Watson, N	1 1/2	4250	4 1/2 x 5 1/2	36x5 36x5	W	Wilcox, A A	1	2100	3 1/2 x 5 1/2	36x4 36x4	W	Winther, 49	2	3250	4 x 5	34x4 34x4	I
Western, W1 1/2	1 1/2	2550	4 1/2 x 5 1/2	36x3 1/2 36x3 1/2	W	Wilcox, D	1 1/2	2775	4 1/2 x 5	36x4 36x5	W	Winther, 70	3 1/2	4200	4 x 5	36x5 36x5 1/2	I
Western, L1 1/2	2 1/2	2550	3 1/2 x 5	36x3 1/2 36x3 1/2	W	Wilcox, E	3 1/2	4250	4 1/2 x 5	36x5 36x5 1/2	W	Winther, 450	4	3690	4 x 5	36x6 36x6	I
Western, W2 1/2	2 1/2	3250	4 1/2 x 5 1/2	36x4 36x4	W	Wilcox, F	5	5200	4 1/2 x 5 1/2	36x5 40x6 1/2	W	Winther, 100	7	5250	4 1/2 x 5	36x6 40x5 1/2	I
Western, L2 1/2	2 1/2	3250	4 1/2 x 5	36x4 36x4	W	Wilson, F	1 1/2	2270	3 1/2 x 5	36x3 1/2 36x5	W	Winther, 140	1	5900	5 x 6	36x6 40x7 1/2	I
Western, W3 1/2	3 1/2	4250	4 1/2 x 5 1/2	36x5 40x5 1/2	W	Wilson, E A	2 1/2	2825	4 1/2 x 5 1/2	36x4 36x7	W	Wisconsin C	1 1/2	1950	4 x 5 1/2	34x5 1/2 34x5 1/2	W
White, 15	2	2400	3 1/2 x 5 1/2	34x5 1/2 34x5 1/2	D	Wilson, G	3 1/2	3685	4 1/2 x 5 1/2	36x5 36x5 1/2	W	Wisconsin D	2 1/2	2300	4 1/2 x 5 1/2	36x6 36x6 1/2	W
White, 20	2 1/2	3250	3 1/2 x 5 1/2	36x4 36x7	D	Winther, 751	5	4520	4 1/2 x 6	36x6 40x6 1/2	W	Wisconsin E	3 1/2	3500	4 1/2 x 5 1/2	36x6 36x10 1/2	W
White, 40	3 1/2	4200	3 1/2 x 5 1/2	36x6 40x6 1/2	D							Wisconsin F	1 1/2	4000	5 x 6 1/2	36x6 36x12 1/2	W
White, 45	5	4500	4 1/2 x 5 1/2	36x6 40x6 1/2	D							Win-Wil, N	2 1/2	2750	3 1/2 x 5	36x3 1/2 36x7	W
White Hick., E	1 1/2	2750	3 1/2 x 5	34x5 1/2 36x5 1/2	W							Wolverine, J	1 1/2	2125	3 1/2 x 5	34x3 34x5	I
White Hick., H	2 1/2	3150	4 1/2 x 5 1/2	36x4 36x5	W							Wolverine, J	2	2875	3 1/2 x 5	34x3 34x5	I
White Hick., K	1 1/2	2300	3 1/2 x 5 1/2	36x3 1/2 36x5	W							Wolverine, J	2 1/2	2640	3 1/2 x 5	34x4 34x7	I
Wichita, K	1 1/2	2600	3 1/2 x 5 1/2	36x3 1/2 36x5	W							Wolverine, L	2 1/2	3425	4 1/2 x 5 1/2	36x5 36x10	I
Wichita, L	2 1/2	2800	3 1/2 x 5 1/2	36x3 1/2 36x6	W							Wolverine, L	3 1/2	4100	4 1/2 x 5 1/2	36x5 36x10 1/2	I
Wichita, M	2 1/2	3000	3 1/2 x 5 1/2	36x4 36x7	W							Yellow Cab M21	1 1/2	2050	3 1/2 x 5	32x4 32x4	B
Wichita, R	2 1/2	3600	4 1/2 x 6	36x4 36x8	W							Yellow Cab M41	1 1/2	2350	3 1/2 x 5	34x4 1/2 34x4 1/2	W

*2-cyl. 16-cyl. 18-cyl. All others, not marked, are 4-cyl. Trac., Tractor. **Canadian made. Final Drive: W—Worm, I—Internal Gear, C—Chain, D—Double Reduction, B—Bevel, 4—Four-Wheel, E—External Gear. *Tires—Optional. †Pneumatic Tires. All others solid. ††—Price includes body. \$—Price includes several items of equipment.

Farm Tractor Specifications and Prices

TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Flow Capacity	TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Flow Capacity	TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Flow Capacity
All-In One	16-30	\$1975	3	Clim.	4-5 x 6 1/2	GDK	3-4	Gray 1920	18-36	\$2000	3	Wauk	4-4 1/2 x 6 1/2	Gas.	4	Port Huron A	12-25	\$1700	4	Chief	4-4 1/2 x 6	G,K	3
Allis-Chalm. B	6-12	925	2	LeR.	4-3 1/2 x 4 1/2	Gas.	1-2	Ground Hog	19-31	2000	4	Erd.	4-4 x 6	GorK	3	Post	12-20	1800	4	Wauk	4-4 1/2 x 5 1/2	GorK	2
Allis-Chalm. G.P	6-12	850	2	LeR.	4-3 1/2 x 4 1/2	Gas.	1-2	Gt. Western St	20-30	1950	4	Beav.	4-4 1/2 x 6	K.	3	Prairie Dog L	9-18	650	3	Wauk	4-3 1/2 x 5 1/2	Gas.	2
Allis-Chalm.	12-20	1495	2	Mid.W	4-4 1/2 x 5 1/2	Gas.	2-3									Prairie Dog D	15-30	1250	4	Wauk	4-4 1/2 x 6 1/2	Gas.	3
Allis-Chalm.	18-30	2150	4	Own	4-4 1/2 x 6 1/2	GorK	3-4	Hart-Parr 20	20	995	4	Own	2-5 1/2 x 6 1/2	K.D	3	Ranger Club	8-16		4	LeR.	4-3 1/2 x 4 1/2	Gas.	1
Allis-Chalm.	10-18	875	4	Own	4-4 1/2 x 6 1/2	G,K	4	Hart-Parr 30	30	1595	4	Own	2-6 1/2 x 7	K.D	3	T-20	8-16		4	LeR.	4-3 1/2 x 4 1/2	Gas.	1
Allwork - G	14-28	1875	4	Own	4-4 1/2 x 6 1/2	GorK	3	Heider D	9-16	1170	4	Wauk	4-4 1/2 x 5 1/2	G,K	3	Reed	15-30	2250	4	Dom	4-4 1/2 x 6	K.	3-4
Allwork - C	14-28	1875	4	Own	4-4 1/2 x 6 1/2	GorK	3	Heider C	12-20	1395	4	Wauk	4-4 1/2 x 6 1/2	G,K	3	Reed A-1	18-36	2400	4	Dom	4-5 x 6	Gas.	4
Andrews Kin.D	18-36	2500	4	Clim.	4-5 x 8	GorK	4	Heider Cult	6-10	1050	4	LeR.	4-3 1/2 x 4 1/2	Gas.	1	Reliable	10-20	985	4	Own	2-6 x 7	Ker.	2
Appleton	12-20	1500	4	Buda	4-4 1/2 x 5 1/2	G,K	2-3	Hicks	20-30		4	Wauk	4-4 1/2 x 6	KorK	3	Res.	12-25	1600	4	Wauk	4-4 1/2 x 5 1/2	GorK	3
Are 1921	3-5	550	4	Own	1-4 1/2 x 5	Gas.	1	Huber Light 4	12-25	1185	4	Wauk	4-4 1/2 x 5 1/2	GorK	3	Russell	12-24	1500	4	Own	4-4 1/2 x 5 1/2	GorK	2-3
Aultman-T	15-30	2200	4	Clim.	1-5 x 6 1/2	G,K	4	Huber Super 4	15-30	1885	4	Midw.	4-4 1/2 x 6	Gas.	3	Russell	15-30	2200	4	Own	4-5 x 6 1/2	GorK	3-4
Aultman-T	22-45	3860	4	Own	4-5 1/2 x 8	G,K	6									Russell	20-35	3000	4	Own	4-5 1/2 x 7	GorK	4-5
Aultman-T	30-60	5000	4	Own	4-7 x 9	G,K,D	8	Illinois, Super	18-36	2500	4	Clim.	4-5 x 6 1/2	G,K	4	Russell	30-60	5000	4	Own	4-8 x 10	GorK	8-10
Automat. B-3	12-24	1785	4	Herc.	4-4 x 5 1/2	Gas.	2-3	Drive	40-70	5000	4	Own	4-7 1/2 x 9	G,K,D	10	Samson M		795	4	Nov.	4-4 x 5 1/2	G,K	2
Avery, S. Cult	6-10		4	Own	4-3 x 4	G,K	2	Imperial C	5-10		2	LeR.	4-3 1/2 x 4 1/2	Gas.	1-2	Sandusky J	10-20	1250	4	Own	4-4 1/2 x 5 1/2	G,K,D	2
Avery Cult-C	5-10		4	Own	4-3 x 4	G,K	2	Indiana F	8-16	900	4	Own	4-4 1/2 x 5	G,K,D	2	Sandusky E	15-35	1750	4	Own	4-5 x 6 1/2	G,K,D	4
Avery B	8-16		4	Own	4-3 x 4	G,K	2	International	15-30	1750	4	Own	4-4 1/2 x 5	G,K,D	2	Shawnee Com.	6-12		2	LeR.	4-3 1/2 x 4 1/2	Gas.	10
Avery C	12-20		4	Own	2-5 1/2 x 6	G,K,D	2-3									Shawnee Com.	9-18		2	Gray	4-3 1/2 x 5		3
Avery	12-20		4	Own	4-4 1/2 x 6	G,K,D	2-3	J-T N	20-40	3485	2	Chief	4-4 1/2 x 6	G,K,D	3-4	Shelby	15-30		4	Beav.	4-4 1/2 x 6	G,K	3
Avery	12-25		4	Own	2-6 1/2 x 7	G,K,D	3-4	Klumb F	16-32	1650	4	Clim.	4-5 x 6 1/2		4-6	Shelby C	10-20		4	Erd.	4-4 x 6	GorK	2-3
Avery	14-28		4	Own	4-4 1/2 x 7	G,K,D	3-4	Knoedon, 1920	25-45	2500	4	Own	4-5 x 9	Gas.	4-6	Short Turn	20-40	1500	3	Beav.	4-4 1/2 x 6	G,K	3
Avery	18-36		4	Own	4-5 1/2 x 6	G,K,D	4-5									Square T A	18-35	2075	3	Clim.	4-5 x 6 1/2	K,G	3
Avery	25-50		4	Own	4-6 1/2 x 7	G,K,D	5-6	LaCrosse M	6-12	900	4	Own	2-4 x 6	G,K	1	Steady Pull	12-24	1485	4	Beav.	4-4 x 5	Gas.	3
Avery	45-65		4	Own	4-7 1/2 x 8	G,K,D	5-10	LaCrosse G	12-24	1250	4	Own	2-6 x 7	GorK	3	Stinson 4E	18-36	1935	4	Beav.	4-4 1/2 x 6	G,K	4
Bates	15-25		4	Own	4-4 1/2 x 6	Ker.	3	Lauson	12-25	1495	4	Midw.	4-4 1/2 x 5 1/2	Gas.	3	Stone	20-40	2250	4	Beav.	4-4 1/2 x 6	G,K	4
Bates Mule H	15-25		4	Midw	4-4 1/2 x 5 1/2	Gas.	3	Lauson	15-25	1685	4	Beav.	4-4 1/2 x 6	GorK	3-4				4	Wisc.	4-4 1/2 x 6	Gas.	3-4
Bates Mule F	18-25		4	Midw	4-4 1/2 x 5 1/2	Gas.	3	Lauson 21	15-30	1985	4	Beav.	4-4 1/2 x 6	GorK	3-4	Tiegs 3	15-27	2625	4	Wisc.	4-4 1/2 x 6	Gas.	3
Bates Mule G	25-35		4	Midw	4-4 1/2 x 6	Gas.	com.	Leader B	12-18	1095	4	Own	2-6 x 6 1/2	G,K,D	2-3	Titan	10-20	900	4	Own	2-6 1/2 x 8	G,K,D	3
Bea.	8-16		4	Own	1-3 1/2 x 4 1/2	G,K	2-3	Leader N	16-32	1985	4	Clim.	4-5 x 6 1/2	G,K	3-4	Top B	30-45	3500	4	Wauk	4-4 1/2 x 6 1/2	Gas.	3-4
Beeman G	2-4	315	4	Own	1-3 1/2 x 4 1/2	G,K	2-3	Leader GU	18-35	2775	2	Clim.	4-5 x 6 1/2	G,K	3-4	Toro Cultivator	6-10		3	LeR.	4-3 1/2 x 4 1/2	Gas.	2
Best	30		4	Own	1-3 1/2 x 4 1/2	G,K,D	4	Leonard E	20-30	2530	4	Buda	4-4 1/2 x 6	G,K	3	Townsend	10-20	1200	2	Own	4-6 1/2 x 7	Ker	2-3
Best	60		4	Own	4-4 1/2 x 6 1/2	G,K,D	8-9	Liberty A	18-32	2475	4	Clim.	4-5 x 6 1/2	G,K	4	Townsend	15-30	1800	2	Own	4-7 x 8	Ker	3-4
Boring 1921	15-30	1850	3	Wauk	4-4 1/2 x 6 1/2	GorK	2	Linn HAJ	40	4500	4	Cont.	4-4 1/2 x 5 1/2	Gas.	4	Townsend	25-50	3000	2	Own	4-8 1/2 x 10	Ker	4-8
Burn-Oil 1921	15-30	1650	4	Own	2-6 1/2 x 7	Ker.	3-4	Linn W	60	5100	4	Wauk	4-5 x 6 1/2	Gas.	6	Tractor Motor	40-50		4	LeR.	4-4 1/2 x 5 1/2	Gas.	1
Capital	15-30	1000	2	Own	4-4 1/2 x 6	Gas.	3	Little Giant. B	16-22	2200	4	Own	4-4 1/2 x 5	K.	4	Triumph H	18-36	2450	2	Erd.	4-4 1/2 x 6	Ker.	4
Case	10-18	1090	4	Own	4-3 1/2 x 5	GorK	2	Little Giant. A	26-35	3300	4	Own	4-5 1/2 x 6	K.	6	Trundar 10	25-40	3750	2	Wauk	4-5 x 6 1/2	GorK	4
Case	15-27	1650	4	Own	4-4 1/2 x 6	GorK	3	Lombard	35-150		2	Own	6-5 1/2 x 6 1/2	Gas.	16	Turner 1921	14-25	1295	4	Buda	4-4 1/2 x 5 1/2	G,K	3
Case	22-40	3100	4	Own	4-5 1/2 x 6 1/2	Gas.	4-5	Lombard	50		2	Own	4-4 1/2 x 6 1/2	Gas.	6-10	Twin City	12-20	1580	4	Own	4-4 1/2 x 6	G,K	3
Caterpillar T11	25		4	Own	4-4 1/2 x 6	Gas.	4	Magnet B	14-28	1875	4	Wauk	4-4 1/2 x 6 1/2	K&G	3	Twin City	20-35	3175	4	Own	4-5 1/2 x 6 1/2	G,K	5
Caterpillar T16	40		4	Own	4-6 1/2 x 7	Gas.	4	Master Jr	5 10	585	4	LeR.	2-3 x 4	Gas.	1	Twin City	40-65	6250	4	Own	4-7 1/2 x 9	G,K	8
Centaur	5-2 1/2	455	2	NWay	2-4 1/2 x 4 1/2	GorK	1-9	Merry Gar 1921	2	230	2	Evin	1-2 1/2 x 2 1/2	Gas.	3	Uncle Sam C20	12-20	1385	4	Weld.	4-4 x 5 1/2	G	2-3
Chase	12-25	2100	3	Buda	4-4 1/2 x 5 1/2	GorK	2-3	Minne All-P	12-25	1200	4	Own	4-4 1/2 x 7	GorK	3-4	Uncle Sam B19	20-30	2300	4	Beav.	4-4 1/2 x 6	GorK	3-4
Chicago 40	40	2500	4	Own	4-4 1/2 x 6	Gas.	4	Minne. Gen.P	17-30	1850	4	Own	4-4 1/2 x 7	GorK	3-4	Uncle Sam D21	20-30	1935	4	Beav.	4-4 1/2 x 6	GorK	3-4
Cletrac	12-20	1495	2	Own	4-4 x 5 1/2	G,K,D	2-3	Minne.			4	Own	4-6 x 7	GorK	5-6	Universal	1-4	475	2	Own	1-3 1/2 x 5	G	1
Dalet	15-27	1750	3	Dom.	4-4 1/2 x 6	Gas.	3	Med. Duty	22-44	3300	4	Own	4-6 x 7	GorK	5-6	Utilitor 501	2 1/2	380	4	Own	1-3 1/2 x 4 1/2	G	5-6
Dart B.J.	15-30	2100	4	Buda	4-4 1/2 x 6	Gas.	3-4	Minne.			4	Own	4-7 1/2 x 9	GorK	8-9				4	Own	4-4 1/2 x 5 1/2	G,K,D	3
Depue	20-30	2500	4	Buda	4-4 1/2 x 6	Gas.	4	Heavy Duty	35-70	4600	4	Light	4-3 1/2 x 4 1/2	KorK	1-2	W. E. Biltwell	12-24	1750	4	Own	4-4 1/2 x 5 1/2	G,K,D	3
Dill	20	2450	4	Cont.	4-4 1/2 x 5 1/2	Gas.	3	Mohawk 1921	8-16	785	4	Own	4-3 1/2 x 5	Gas.	2-3	Victory 1921	9-18	1350	4	Gray	4-3 1/2 x 5	Gas.	2
Dill R.W.	20	2980	4	Midw	4-4 1/2 x 6	Gas.	3	Moline Univ D	9-18	990	2	Own	4-3 1/2 x 5	Gas.	2-3	Victory 1921	15-30	1750	4	Wauk	4-4 1/2 x 5 1/2	Gas.	3
Do-it-All	-7	595		Own	4-1 1/2 x 5	Gas.	3	Moline Orch	9-18	1075	2	Own	1-2 1/2 x 3 1/2	Gas.	3-4	Vim B	15-30	1650	4	Wauk	4-4 1/2 x 5 1/2	Gas.	3
Eagle F	12-22	1390	4	Own	2-7 x 8	GorK	3-4	Motor Macult.	1 1/2	195	2	Own	4-4 1/2 x 6	Gas.	3-4				4	Wauk	4-4 1/2 x 5 1/2	G,K	3
Eagle F	16-30	1450	4	Own	2-8 x 8	GorK	4-5	Motor	15-30	2250	4	Buda	4-4 1/2 x 6	Gas.	3-4	Wallis K	15-25	1600	4	Own	4-4 1/2 x 5 1/2	G,K	3
E-B AA	12-20	1445	4	Own	4-4 x 5	GorK	3	NB 1	3-6	425	4	Own	2-3 1/2 x 4	Gas.	2 1/2	Waterloo N	12-25		4	Own	2-6 1/2 x 7	G,K	3
E-B Q	12-20	925	4	Own	4-4 x 5	GorK	3	NB 2	3-6	425	4	Own	2-2 1/2 x 4	Gas.	2 1/2	Waterloo S3	28-53	5250	2	Wisc.	4-5 1/2 x 7	G,D	6
E-B	16-32	2000	4	Own	4-4 1/2 x 7	GorK	4	Nichols Shop	20-42	3100	4	Own	8 x 10	GorK	3-6	Wellington B	12-22	900	4	Erd.	4-4 x 6	Ker.	2-3
Evans	18-30	2000	4	Buda	4-4 1/2 x 6	G,K	3	Nichols Shop	25-50	3460	4	Own	9 x 12	GorK	4-7	Wellington F	16-30	1400	4	Chief	4-4 1/2 x 6	Ker.	3-4
Fageol D	9-12	1525	4	Lyc.	4-3 1/2 x 5	Gas.	2	Nichols Shop	25-50	3460	4	Own	9 x 12	GorK	4-7	Western. 1920	16-32	2100	4	Clim.	4-5 1/2 x 6	Gas.	4
Farm Horse. B	18-30	1885	4	Clim.	4-5 x 6 1/2	G,K	3-4	Nilson Jr. E	15-25	1775	4	Wauk	4-4 1/2 x 5 1/2	GorK	3	Wetmore	12-25	1650	4	Wauk	4-4 x 5 1/2	G,K	3
Farquhar	15-25		4	Buda	4-4 1/2 x 6	G,K,D	3-4	Nilson Senior	20-40	2475	5	Wauk	4-5 x 6 1/2	G,K	4	Wharton E	12-20	1800	3	Buda	4-4 1/2 x 5 1/2	Gas.	2
Farquhar	18-35		4	Own	4-6 x 8	G,K,D	4-5	Oil Pull K	12-20	1485	4	Own	2-6 x 8	K,D	3	Wh							

MOTOR WORLD

for
DEALERS, JOBBERS AND GARAGEMEN

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No. 8

A Hard Pull? Sure, But Worth It!



AM I MY BROTHER'S

*A Suggestion to Manufacturers,
Distributors and Jobbers*

A DISTRIBUTOR who has had a commendable record for educational work among his dealers remarked a few days ago that he was going to "lay off" until spring.

He added that some of his dealers very likely would be unable to survive the fall and winter and he didn't propose to continue an activity that would result in his wasting money on them.

This is the only distributor's statement, of this nature, which has come to the attention of Motor World.

Motor World does not think much of his logic.

And it does not believe other distributors, nor manufacturers or jobbers, will think much of it.

If this distributor continued his dealer development work he might "waste" a little money on some dealers, doomed by the collision of unbusinesslike methods with conditions that demand businesslike management, who are going to pass out of the picture.

If he does not go on with the practical assistance of his dealer organization which has been one of the foundations of his success he is going to lose not only a few dealers who could not be saved by the most heroic outside help, but others who would be able to negotiate the hill just ahead if the distributor stood by to lend a helping hand over some of the steeper places.

IT is generally conceded that the peak of the readjustment crisis is past, but there is hard work ahead, and lots of it, for business men who are going to be found doing business profitably at the old stand when the violets bloom again.

There are indications that the farming areas, where new crops and some of last year's yield of the soil mistakenly held for higher prices are already being turned into cash, will be better buyers within a few weeks than they have been for many months. But the industrial districts, where unemployment has laid its withering hand and where savings of the high wage days have been largely spent, may not be as good buyers as they have been. This means that merchants, including those in the automotive industry, must face this fall and winter the same stern necessity that has confronted them for approximately a year—the necessity of finding a market and selling it.

The retailer—of cars, trucks, tractors, automotive equipment, tires, service—is the man who must find this market and sell it and upon his success in doing this depends the success of the manufacturer, dis-

tributor and jobber who exists on the profits of wholesale distribution.

Is there not an obligation upon the manufacturer, distributor and jobber, not an altruistic obligation but one founded upon good business sense, to help the retailer in his selling job?

And is not that obligation laid more heavily than ever before upon the manufacturer, distributor and jobber, with winter and the final period of readjustment approaching?

THE distributor who believed some of his dealers would not survive probably was right in this particular. There are some men in the automotive business who would be more useful to society—and to themselves—in other vocations. They do not fit. They lack either ability to manage or to sell, or both. They sailed along with some serenity as long as the fair wind of a sellers' market was behind them, but when they ran into the head winds and cross winds of the buyers' market their lack of business seamanship became painfully apparent. When they pass out of the automotive field neither they nor the industry will be losers.

But the great rank and file of the retail trade deserves to remain in the industry—is going to remain—and it will pass through the months ahead with greater profit to itself and the entire industry if there is a well-forged chain of co-operation and assistance extending from the seat of production on through the distribution system to the retailer.

NO dealer or garageman wants a manufacturer's, distributor's or jobber's representative to step in and run his business, but any dealer or garageman who is intelligently alive to the possibilities of fall and winter business and of sales in 1922 will welcome constructive assistance. Any such dealer or garageman knows that the size of the manufacturer's or wholesaler's organization, not to mention other considerations, makes it possible for him to learn things about selling and management which are not within the retailer's reach, unassisted.

AND what can the manufacturer do? It is unnecessary to go into details—manufacturer organizations can work these out for themselves—but it is only necessary to recall the complete sales plans, sales promotion helps, management and cost finding information and other dealer helps worked out by some factory sales executives to establish the possibilities of assistance for the retailer from this quarter. One car manufacturer who recently stirred up

KEEPER?

And Some Remarks on the Dealers' Fall and Winter Problems

comment by cutting 1 per cent off his retail discount has followed the action by an offer to go 50-50 with dealers in mail sales promotion work, in addition to the prevailing 50-50 on newspaper advertising. This action may seem a bit drastic—it is not the purpose to discuss that phase of the question here—but at least the manufacturer, taking this means of insisting on sales promotion, is rewarding dealers who comply as well as penalizing dealers who refuse to meet his suggestion. It may be added that dealers who had been doing adequate promotion work by mail have found that the manufacturer's 50 per cent contribution to its cost offsets the discount reduction.

Whatever the plan to be followed, it should be said that every manufacturer's executive in charge of sales should realize this fall that allotments and distribution are minor problems and should set himself and his staff from the first of September on, working out practical plans to help the dealer sell.

WHAT can the distributor do? One, who has just written to Motor World, says a wholesaler of cars or trucks can, and should if he can get the financial backing, help his dealers to stock cars for later sale. Another says a distributor should help his dealers work out and get in operation prospect card indexes and other methods of following up sales leads. Here's what another distributor is doing:

For more than a year this distributor has been requiring—and obtaining—monthly financial statements of his dealers' business affairs. And this despite the fact that some of his dealers sell more than the two lines of cars, one low priced and the other medium priced, which he distributes. At first the dealers resented the demand for these statements, but their sentiment has changed since they found the distributor, with the information he gleaned from the statements, helping them readjust their internal organizations to eliminate losses and to increase efficiency. And the distributor's requirement of monthly statements has forced his dealers to keep books, which has helped them to present intelligible statements to their bankers **AND TO GET BANK LOANS.**

Any distributor who wants to give his dealer organization stability and permanency knows that mere distribution of the product is not his big job. His business will be as good as his dealers make it and his dealers will be as good as they make themselves—with his assistance.

WHAT can the jobber do? The sales promotion movement of the Automotive Equipment Association is one answer to this question. This move-

ment primarily is one of dealer development through the agency of the jobber and his salesmen, *without whose vigorous co-operation, not next spring but right now, it cannot succeed.*

But what can a jobber do individually? The question does not require a detailed answer. Jobbers who are worthy of the name **KNOW** how they can show retailers effective methods of advertising, displaying, demonstrating and selling goods. They know the job must be done through the jobber salesman and they know how to invest some of the salesman's time in dealer development as contrasted with mere taking of orders.

One jobber has published a little book devoted exclusively to retail salesmanship of automotive equipment, a mighty readable book which cost the jobber quite a bit of money but which is paying for itself in good will and more effective selling effort of dealers handling his goods. And this jobber didn't just print the book and tell his dealers, "Here it is." Through his sales staff he is pushing the book and the better salesmanship idea—and *the book is being read.*

Another jobber has been spending three days a week on the road, finding out how few real jobber *salesmen* he had. He is going to have more salesmen, without firing or hiring anybody, before he gets through.

Expense? Effort? Everything in business that yields returns calls for expense and effort. Jobbers who will expend both, wisely, will find themselves in a stronger position next spring.

MOTOR WORLD has never pleaded and will never plead the case of the indolent, got-in-the-business-by-chance dealer or garageman who won't try to be businesslike and who won't let anybody help him try. It has seen many of this class fall by the wayside and it will shed no tears for others who may meet a similar fate this fall and winter. But it does believe that *the manufacturers and the wholesalers in this business have more than an opportunity—an obligation—to assist in developing business men.*

Motor World believes no manufacturer or wholesaler with any regard for the general good of the industry—or his own future—can stand idly by watching a drama of survival of the fittest. Despite the pleasant fiction to the contrary, there are no self-made men. We live and develop with others, for others and with the aid of what others do for us. Every year, this year, this fall and winter, the automotive retailer needs and is entitled to all the help the manufacturer and wholesaler can give him.

Which?

LIVE PROSPECTS OR JUST NAMES?

**There's a Difference and It May Mean Profit or Loss
in Selling Cars—This Story Tells How a Missouri
Dealer Judges Prospects and Some Other Interesting
Things About His Sales Policy**

PROSPECTS? What do you mean by "prospects"?

Do you mean the names of people who are willing to talk about owning passenger cars?

Or do you mean the names of people who are likely to buy and pay for passenger cars?

"Prospect," in the vocabulary of the Wolfley Auto Co. of St. Joseph, Mo., means a person who is likely to buy and pay for a car—and who will not cause the firm an excessive amount of trouble.

"We do not make any effort to add to our prospect list," said C. D. Wolfley. "Our effort on the list is toward elimination of names. Every few months the list gets cluttered with names which are a liability to our sales force rather than an asset; and we have to weed these out, so that the salesmen will not be wasting their time on unprofitable so-called prospects.

"There are three factors involved in the judgment of the value of a prospect:

"1—He must be a man who is able to pay for a car.

"2—He must want a car.

"3—He must be a type of man who will not cause us more trouble than his business is worth.

"I PUT the ability to pay first. If any man in our territory who we think might as well have a car, or a new car, is able to pay for one, we are willing to cultivate him, to stimulate a desire for a car or a new car. The second consideration does not put the name on the list until we have found out whether the man is able to pay for a car if he should be led to buy one. We have concluded from our experience that it is not worth while to expend selling effort on people who merely have the desire for cars, but who cannot make satisfactory arrangements for payment when the sale is made.

"The third factor we have found to be important after many experiences with prospects of the bargaining class. We frequently take off of our prospect lists names of wealthy men who replace their cars every year or so, because these men insist on concessions that we will not grant, and want to spend altogether too much time discussing deals. Their very presence in our office disturbs the whole force, and upsets the salesmen so that they lose part of their efficiency for going after good business. Such men are not profitable to us as car owners, because they are not the kind of boosters that help our business. Everybody knows them as close bargainers; and whether we grant concessions to them or not, the public would assume that they were granted concessions or they would not have bought our car."

In this period when, especially in the larger cities, dealers are earnestly building their prospect lists, the disclosure of a firm that is pruning rather than

stimulating its list is interesting to say the least. It happens that the Wolfley company has consistently aimed at a satisfied clientele of owners, rather than the movement of a volume of cars. The

What Do You Mean— PROSPECT?

Do you know one when you see him? Here's the test applied prospective prospects by the Wolfley Auto Co., St. Joseph, Mo.:

1—He must be a man who is ABLE TO PAY.

2—He must WANT a car.

3—He must be the kind that WILL NOT CAUSE MORE TROUBLE THAN HIS BUSINESS IS WORTH.

You will want to read this interesting story of how one dealer has maintained a constantly increasing sales volume by the application of solid, common sense business ideas in merchandising motor cars.

It is the story of a dealer who went ahead selling cars because HE BELIEVED THE PUBLIC WANTED PASSENGER CARS AND WAS WILLING AND ABLE TO PAY FOR THEM.

result is that sufficient names are supplied by owners, of persons who are interested in the car, to keep the salesmen profitably busy. In fact, by far the larger part of the sales are made

in the company's salesrooms to persons who have come in with the purpose of buying a car from this company—or, anyway, with a favorable inclination toward this company and its car. Salesmen go into the country to visit prospects only on special request of the prospects or after arrangements for the call. But even when salesmen make such trips, the majority of the actual sales contracts are signed in the company's office on later visits to town by the prospects.

"We do not approve of prospect-hunting by salesmen," said Wolfley. "Canvassing by salesmen is a wearing procedure, which tires them out, without adequate compensation in the results. Suppose they do accumulate a string of good prospects—they are so tired after their tramping around, that they haven't the pep and punch to sell cars."

Proof of the soundness of this policy concerning prospects may be found in the fact that the Wolfley Auto Co. has had a consistent gain every month but one this year, over the same months of 1920. February was only a few cars behind February of the previous year. As many as 12 cars were sold in a single week in June, 1921. One week, four cars were sold on Friday and two on Saturday; only one note, that for \$500, was taken; the other deals were cash. July ran ahead of last year.

There are two striking features in the success of the Wolfley Auto Co. in maintaining its volume through the first six months of 1921.

1—The company went ahead selling passenger cars as though the company's

conventional and unsensational methods were the right methods and as though it was right to sell passenger cars.

2—The company went ahead selling passenger cars as though the public wanted passenger cars, was willing and able to pay for passenger cars.

There are two incidents which reflect with especial clarity the imperturbabil-

ity (it's a long word, but worth all the space it takes in this connection) of the Wolfley Auto Co. through the hilarious and terrifying conditions of the past few years. One of these incidents is its relinquishment of a motor truck agency, two years ago, when many dealers were looking around for additional lines to help them add to their volume. The other incident was their relinquishment of the agency for a second, lower priced passenger car, about the same time, when some dealers were seeking additional makes to render easier their task of selling and promoting deliveries. The company concentrated on one thing, the Mitchell passenger car, which they had started to sell in that territory 14 years ago. They expected to sell Mitchells — they HAD to sell Mitchells. And they sold them; there was nothing else to do.

Selling passenger cars without extraordinary methods was not quite as difficult for the Wolfley company as would have been the case except for one factor: The ordinary methods had been the right methods—obviously right, since they kept on producing results.

But there is no "story" in these ordinary methods. Just to round out the historical record, a few elements may be mentioned:

1—The company had not wasted any time on hopeless prospects; nor cumbered its salesmen with assignments to prospects whose purchasing ability was not known. There wasn't much waste effort in sales work.

2—The company had always made one price to all. The reputation for square dealing extended into two states outside of Missouri—Kansas and Nebraska, in each of which states the company has a branch.

3—The company has aimed, throughout these 14 years, to have every owner of a car bought from it a boosting owner. And it has kept track of cars sold, and

knows that the owners are gratified—that they are much more than satisfied.

4—The company has built an accessory business, partly for the profit in it, but more apparently for the increasing of its prestige as passenger car distributor. Car owners come fifty miles to buy tires of Wolfley—and one can easily understand that they will travel

until the salesman had tried to sell them?

Wolfleys knew two things about their field which enabled them to go ahead confidently. They knew that there were many live prospects; second—they knew which were these live ones.

They knew, for instance, that the stockmen of northern Missouri had been

hard hit by the "readjustment," had lost money, and were losing money every month through late 1920 and 1921; but they knew, further, that the stockmen were able to absorb this loss.

The men who handled cattle had made money in the previous years—enough to carry them through the period of unprofitable operations.

Instead, therefore, of avoiding a stockman who was known to have sold hogs at a loss, they cultivated these stockmen. And many, many cars have been sold to stockmen who had just come from the yards where they had sacrificed stock. There are many instances of farmers coming in, paying cash for cars, after sustaining a loss of a thousand dollars on a sale of cattle, or after selling a load of hogs without profit.

The Wolfley Auto Co. has, therefore, been going ahead with business as usual. For instance, in the stress of competition, reports were circulated prejudicial to the springs and rear axle of the car handled. The company, having kept its records carefully, went over them and discovered that there had been no axle trouble with owners for seven years, and no spring trouble for more than three years. The company promptly announced a guarantee of the rear axle for two years, of springs for the life of the car. The guarantee was vigorously advertised for a week or so—and the competitive attack died suddenly.

But that was just an incident in the day's business. Advertising, in newspapers, by circulars, calendars and otherwise, has also been a normal incident.

"There's really nothing much to talk about," said C. D. Wolfley of the firm. "We've been doing business for 14 years, and the people know us to be on the square. We keep hammering away, and nobody, however good a friend or customer he may be, can get a better deal out of us than the stranger."

Profits?—Certainly He Makes Them—And He Wants His Customers to Know It

"WE want the public to KNOW that we are making a good profit on sales," says C. D. Wolfley, Mitchell dealer in St. Joseph, Mo., whose business is the subject of this story.

"When a prospect hints at concessions or tries to get a higher valuation on a used car, we make it plain that WE ARE GOING TO PROFIT BY THE TRANSACTION OR THERE'S NO DEAL. He usually can see the point—that his protection as car owner is assured only if WE MAKE MONEY.

"A car on the floor doesn't cost much—but the moment a car is sold and paid for, OUR RESPONSIBILITY BEGINS. It's up to us to see that this car is an asset to us rather than a liability. Is the owner using the car safely, economically, satisfactorily? Is the car standing up—and is the owner boosting the car and us—that's what we want to know.

"When the purchaser begins to realize what he is expecting from a car and its dealer he begins to see that the profit on the car does not all go into our pockets. A large part of it goes to maintain the business, which, in fact, is the insurance on the continuing value of the car to the owner."



C. D. Wolfley

the fifty miles much more eagerly to buy a motor car from this firm.

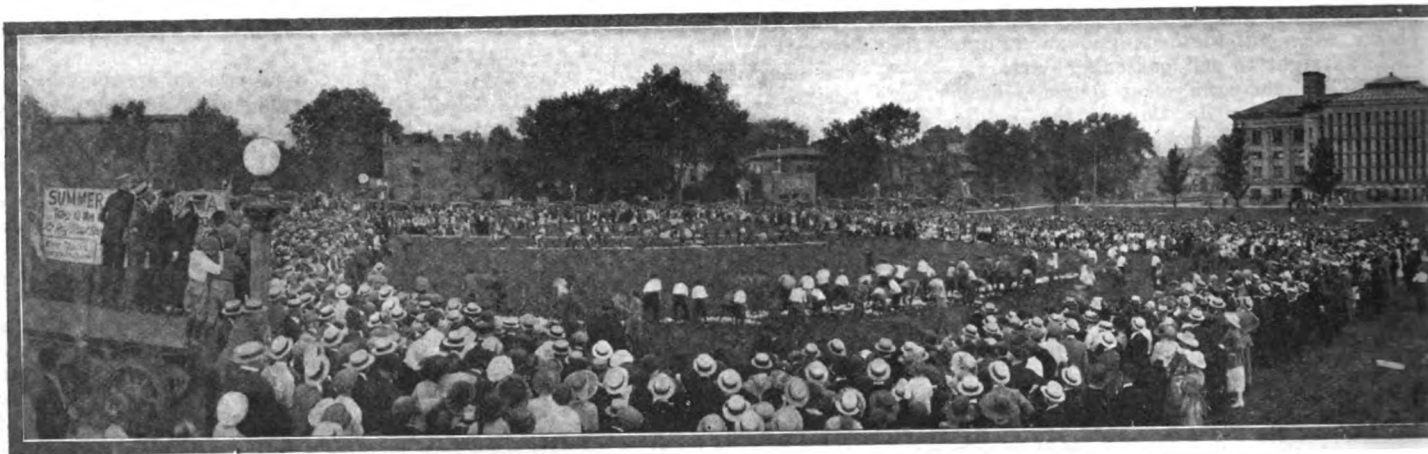
5—The company KNOWS its territory and the people thoroughly.

No. 5 is particularly important. It is important with reference to 1921 business, because it has enabled the company to expend its efforts on the prospects that would probably buy cars. But that is only an incident. The real value that this company got from knowing its territory in 1921 was this:

It knew that enough people who wanted cars had money to buy cars, to keep its volume up to par.

When a dealer knows—absolutely knows—that there are plenty of people able as well as willing to buy cars, he need not be disturbed by any sort of propaganda.

And the Wolfley brothers had a big advantage, there, over many motor car dealers. How many dealers were there who were sure that their entire prospect lists were temporarily dead? How many dealers thought that some of their prospects were good, but couldn't know certainly which prospects were live ones



Summer Show Stimulates Sales for Denver Dealers

Displaying Cars and Camping Equipment in Natural Elements Proves Big Merchandising Event

DENVER, Aug. 13.

STOP complaining and put on an outdoor automobile show before the weather gets too cool for comfort.

That was the advice of the Denver dealers at the conclusion of their first summer show, held Aug. 10-12, under the auspices of the Denver Automobile Dealers Association.

The big thought behind the show was to stimulate interest in motor car ownership and motoring. The setting was the beautiful Civic Center of Denver, where cars and camping equipment could be shown in surroundings that were ideal for the purpose. So it was not surprising that when displayed against such a background the motor cars created desire of ownership in thousands of spectators which was translated into several sales and a large number of prospects during the three days of the exhibit.

In the first place, the cars were given a much more natural background than could possibly be arranged in any building. The show seemed less of a formal affair than the indoor variety, and the crowds apparently were more at ease. In the daytime and in the early evening there was magnificent view of the mountains, and this view had a tendency to make the average person long to step into an automobile and enjoy the enchanting canyons, tumbling mountain streams, the picturesque lakes, forests, glaciers and other glorious features of the snow-capped peaks.

The location was ideal both for visitors and exhibitors. The Civic Center is practically surrounded by automobile concerns. Then, too, the Public Library and the Greek Theater, on the grounds, in the picture with the State House and

Court House near by, the people's own institutions, lent an atmosphere of democracy.

Thirty-two passenger car dealers exhibited two cars each in the center of the beautiful municipal park, while widely scattered on the lawns were the camping equipment exhibits, showing tents, cots, tables, stoves and other paraphernalia dear to the heart of the motor camper. These equipment concerns, all being manufacturers, were particu-

larly pleased with the show, which gave them an exceptional opportunity to strengthen both their local and distant markets because of the large number of tourists in Denver now from all parts of America and even from foreign countries.

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How Denver Held a Summer Show

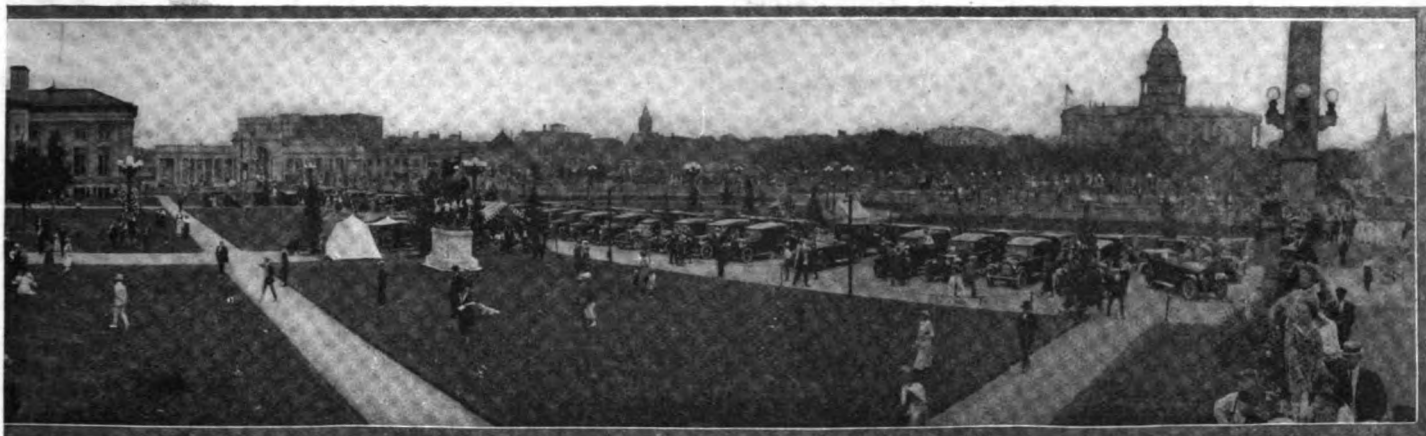
The Denver Automobile Dealers Association, cooperating with a local newspaper in presenting a Summer Automobile Festival did these things:

- 1—Secured the beautiful Civic Center for the event.
- 2—Obtained support of newspapers in advertising the project.
- 3—Combined camping equipment displays with motor cars, stressing the comfort and convenience of modern motor camping.

Could you hold an outdoor show before cool weather? Read how Denver did it.

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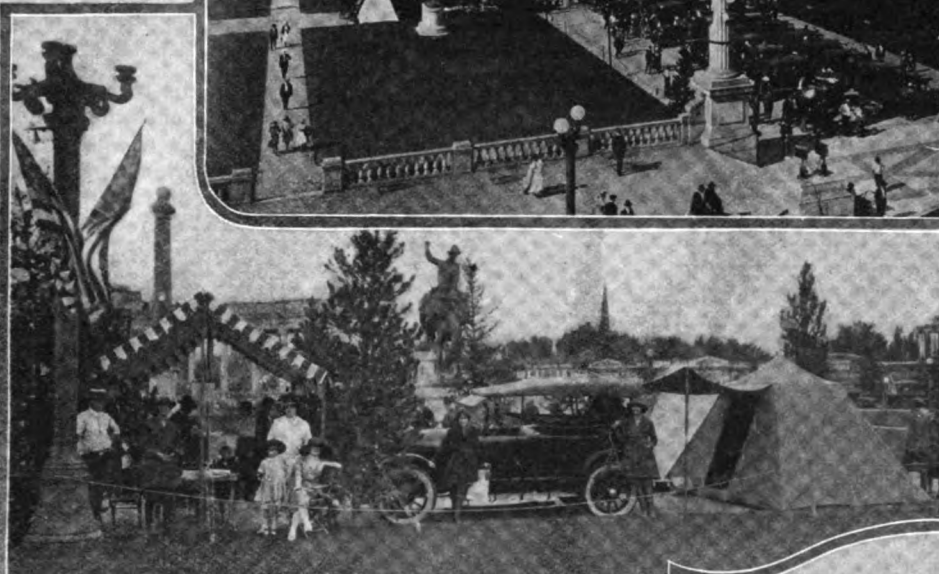
A band concert and vaudeville entertainment in the Greek Theater naturally received their share of attention, but



A Snowball Battle in August at the Denver Dealers Summer Show

One of the entertainment features at the Denver Summer Automobile Show was a snowball battle by Boy Scouts in the beautiful Civic Center where the car exhibit was staged.

Denver's first open-air show, as seen from Greek Theatre. Entrance to theatre shown in foreground, with spotlights set to play upon stage for vaudeville entertainments every evening.



One of the motor camp equipment exhibits at Denver's summer automobile show

One of the truckloads of snow for Boy Scout's battle and U. S. Army officers ready to act as judges and referees



One of the thirty-two pairs of passenger cars at Denver's summer motor show



How Three Dealers Are

SELLING ACCESSORIES IN JERSEY

Midsummer Heat and Depression Talk Don't Prevent These Active Camdenites from Finding Customers and Selling Equipment—Business Is Better Than a Year Ago

WHILE retailers of automotive equipment in Philadelphia and nearby cities, towns and boroughs complain that sales are lagging, across the Delaware River in Camden they're selling accessories rapidly—in nearly all cases business being at least as good as last year and in some instances very much better.

Hand the palm to H. S. Corson, 517 Market Street. He retails and distributes accessories in the proportion of about fifty-fifty. His well-stocked store is undergoing stiff competition, for there are four other automotive equipment shops within an area of one square from him and eleven, counting automobile dealers who handle accessories, within two squares. Yet his business is considerably better than last year. Owing to certain reductions in lines he carries, he had the problem of doing 30 per cent more in volume to equal his business at this time last year, but he has easily passed it and his June and July sales have been gratifying. For the first six months of this year he was \$2,000 ahead of his 1920 sales. His stock at the beginning of this year he valued at approximately \$24,000.

CORSON concentrates on his immediate field, selling no gasoline, or oil from in front, and having no time-consuming free air arrangements. He is sole proprietor of his business and employs two assistants. They all do their share of soliciting trade, but this is done spontaneously and without "beats" or routes assigned.

Corson makes a special point of obtaining the trade of garagemen, seeing many of them personally and suggesting "needs" that will be of actual assistance to them in their business. This means that he observes closely as he goes among them.

Among the "high points" for garages, in addition to the usual accessories, are rim part cabinets divided into twenty-eight bins of convenient size, and Lowell vulcanizing machines, both moulds and tube plates, and the outfits accompanying them. These articles take strong hold with the larger and more prosperous types of garages.

Huge road signs erected at strategical traffic centers find very many customers, especially of the tourist variety, for him. He is able to trace this source of prospects and customers positively, for they sel-

dom fail to speak of the sign which directed them to him, once they arrive at his shop. Each sign is at least 50 ft. long with a proportionate height and shows a large picture of his store, with a customer about to enter. The

enough to be read at a considerable distance.

Corson mails at least once a month to his list of customers and prospects a mimeographed letter making suggestions and inclosing an eight-page "suggestion booklet" with a two-color cover, containing plenty of cuts and prices. He does not rely upon the manufacturers' envelope stuffers and general advertising matter in this connection, although he uses that as well. His booklet, which he gets out himself, is entitled "Just What the Dealer Wants." He is now making a special "drive" on rims and rim parts and is having considerable success with his campaign.

While he suggests the rim part cabinets containing bins to garagemen, to dealers he suggests a board with special catalogue-numbered and lettered displays attached. Corson distributes Firestone steel products, Kelsey wheel products, Standard Parts Company equipment, Jaxon steel products and Cleveland Welding Company equipment. He retails United States and Goodrich tires, the latter including

pneumatic truck tires.

Can you profitably inject some of Corson's ideas into your business?

Have You Tried These to Boost Your Sales in the Summer "Let-Down" ?

Salesroom "suggestion" display boards.

Your own advertising circulars, compiled especially for your trade.

Monthly letters to your regular customers and prospects.

Conspicuous road signs at important traffic intersections.

Courteous and stock-wise salesmen.

Concentrating your window and interior displays for a day or two on a single type of article, then making a complete change.

If you conduct a garage, classifying your various patrons and making suggestions appropriate to each.

If you are an accessory dealer only, soliciting and circularizing regularly every garage in your community.

name and address are emphasized and the lettering, including enumeration of some of the stocks, is large

Here Is a Car Dealer That Is Selling Accessories

Another Camden concern which is doing a good business in accessories is the New Jersey Auto & Supply Co., Delaware and George Streets. Its trade in this line is 10 per cent better than for this period last year.

Unlike Corson's, this establishment does not particularly stress automotive equipment, as it maintains a dealership in Buick and Peerless cars and does a large car storage business, which it divides into three main classes—shoppers, who park for a few hours; theatergoers, who succeed the shoppers and usually remove their cars before midnight, and the "night owls," who store their cars for all night. Prospects for accessories are found in each of these classes.

While the company does not make a point of soliciting customers outside its store, it takes pains to have behind the accessory counter a salesman who is thoroughgoing, stock-wise and

courteous. The company works on the theory that such a salesman, who can make worth while suggestions to customers and who makes them his friends, can be more effective than any ordinary means of newspaper advertising.

As a means of attracting custom, this concern changes its window and interior displays almost daily, concentrating for the time being on one type of article, till its emphasis shall have impressed the prospect. One day the stress may be laid on a horn and on another, for instance, a single line of tires.

These methods enumerated have sufficed to push accessory sales ahead to an enviable extent without any special campaign.

—And Here's a Garageman That's Moving Accessories

Barton S. Muir, who conducts a garage and Oakland agency at 1900 Federal Street, carries under ordinary circumstances a \$6,000 stock of accessories. In June, 1920, he did a

business, including everything, of only \$8,000. His sales during the June just passed amounted to \$37,500 and of this sum accessory sales were no inconsiderable portion.

Muir says this was just a natural absorption and that he conducted no campaign of any sort, nor did he push accessories in any special way.

Muir has a sort of "silent salesman" standing conspicuously opposite the entrance to his showroom. It is a good-sized black display board with large white lettering. This board is headed "Suggestions," and its arrangement is as follows:

SUGGESTIONS		
Bumpers	Spotlight	Mirror
	Extra Tubes	
Tire Patches	Windshield Cleaner	
Spark Plugs	Grease	
5-Gal. Can Polarine,	\$4.50	

These items, white on a black background, cannot fail to strike the eye of the person entering. There is usually some special bargain, like the Polarine, with its price, bringing up the foot of the suggestions.

A Unique Motor Car Display

THE Screven Bond Motor Co., Jacksonville, Fla., recently presented the city with a decided hit in its window exhibit. This display was in honor of the completion of the bridge over the St. John's River. It consists of a miniature bridge connecting two miniature cities—Jacksonville with South Jacksonville. Reproduced in perfect facsimile are the river, the road and the sandy beach over which there is a procession of tiny cars.

The buildings showing the uneven sky-line of Jacksonville are made of cream-colored cardboard, carefully cut and held together by white passe-partout. The doors and windows are lined with paper, and the glittering lights through them, as well as the street lights on the water front, are reflected in the river.

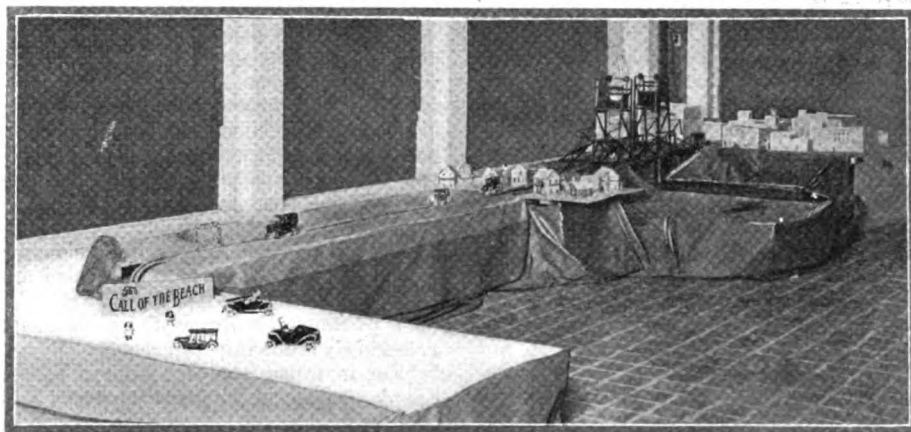
This exhibit requires three platforms, one carrying the model of Jacksonville, another carrying South Jacksonville and Atlantic Boulevard, the third platform, covered with sand, represents the beach and ocean. The bridge is fastened to the end of the platform carrying the cities; it is mounted in the center with two sets of piers resting in a galvanized iron tank filled with water to represent St. John's River. This tank, resting on the platforms, contains several miniature ships. The bridge is a very close duplicate of the St. John's River bridge. The two weights suspended on chains are resting on pulleys. A red light is attached to each end of what represents the draw. The weights are constructed of tin cracker boxes filled with sand and painted black. The bridge, constructed entirely of steel, will easily carry a hundred pounds.

The travel of the toy motor cars from

the city to the beach is accomplished by an endless belt with the cars on it and running in a groove which is a very good imitation of the Atlantic Boulevard. The belt is carried over a pulley at each end, one of the pulleys being attached

in which the exhibit is given—the showroom of the Paige car. The two large front windows advertise the Screven Bond Motor Co. and the Paige. The current for all the lighting effects is supplied from six-volt storage batteries.

A Window Display with Local Interest



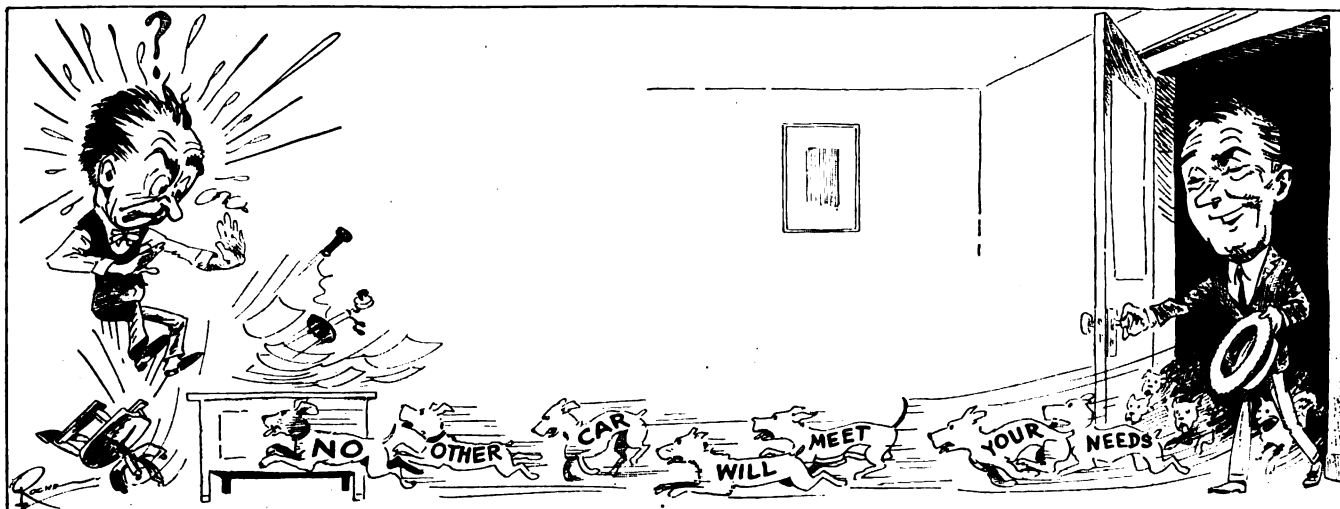
When the bridge connecting Jacksonville and South Jacksonville was completed recently the Screven Bond Motor Co. cashed in on the event in its window display

by a series of bicycle sprockets and chains to a small one-quarter horsepower electric motor to accomplish the necessary slow travel of the belts.

The street lights are formed by two candle power bulbs sitting on posts. Each block of buildings is lighted by twenty-one candlepower bulbs placed inside. One building carrying a flag is the center of interest for obvious reasons. It is a facsimile of the building

while the electric motor is driven by city current.

The idea was conceived by L. E. Bissell of the company from the slogan, "The Call of the Beach." Bissell developed his own design. The entire exhibit, including the electrical and mechanical work, was done in the Screven Bond Motor Co. shops and required two days to set up and test out after the material was assembled.



WORDS!

Yours vs. Your Prospect's

By NEAL G. ADAIR

REFUSED to talk—Too busy to talk—Declined to see me—Not interested."

In a singsong that would have been monotonous but for the tinge of indignation in his voice, Henry Bennett, Redman distributor in Callawassa, read from the reports of his salesmen.

"Can you buy any sea-going yachts on that?" he demanded.

Reilly, who managed to drop in occasionally on the old friends of his active days of Sennett distribution, despite his managerial excursion out to the gear works, listened as patiently as he would have to the plea of his ten-year-old son for a new baseball and glove. He always listened to Bennett, a friend since boyhood days rather than a mere business acquaintance, and afterward Bennett usually listened to him, occasionally with some squirming but usually with considerable profit.

"Henry, the trouble with your salesmen—," Reilly began, then drifted into a remark about the weather as Tony stuck his head and shoe-shine box inside the doorway.

"Not to-day, Tony," said Bennett, but instead of departing Tony stepped smilingly across the threshold with the query:

"Go to the races 'safternoon?"

"Forgot 'em absolutely," said Bennett, promptly submitting his pedal extremities to the caress of brush and rag and "treating" his caller.

"There's your answer," suggested Reilly, after Tony and his merchandising smile had gone in search of other prospects. "Tony doesn't merely say, 'Shine?' yesterday and to-day and to-morrow and so on until he gets ready to go back to Sicily and become a landed aristocrat. He comes in with a new thought. You didn't want a shine this morning and he couldn't have sold you one—for this morning—but he had heard about the races and guessed maybe you

would be going out to Fairmount this afternoon to see 'Battle Cruiser' run in the steeplechase. And he knew you wouldn't step out of your sedan at the grandstand with dirty shoes."

"Uh-huh," grunted Bennett, "but a shine's a shine and costs ten cents and a Redman's a Redman and costs \$2,000."

"Yes," retorted Reilly, "and human nature is human nature and a man who thinks he isn't a prospect for a new automobile has just as much of it in him as you and me—and Tony—and maybe Tony would psycho-analyze, whatever that is, higher than either of us.

"That's what ails your salesmen, some of them, and my—or Tommy Trumbull's—salesmen, some of them. It's what ails all these fellows that keep turning in second and third and fourth call reports decorated with 'Refused to talk' and 'Too busy to talk' and so on to the end of the tiresome chapter. They've got their prospects ticketed as prospects instead of human beings and they are going back on these second and third and fourth calls with the same old story.

"F'instance," prompted Bennett, grudgingly showing interest.

"For instance, one of Trumbull's men, Frank Jasper, admitted the other day that he had made three calls on Elihu Tucker, who runs the Old First bank—and a ten thousand-dollar De Luxe sedan—trying to sell him a Sennett coupé as a handy car, and he just talked about the car every time. He should have known, before he went back for a second or at least a third call, that Mrs. Tucker often took the trolley instead of the big De Luxe to get down to the shopping center and that the Tucker boy and girl have to walk almost a half mile to school. He should have gone back with a new thought about Mrs. Tucker's actual need of her own car for her house engagements. And if that didn't work, another new thought, full of meaning

for parents of the Tucker type, would have been in the advantage of a medium priced, economical coupe—Tucker doesn't have a chauffeur, you know—to get the children to school with dry clothes on rainy days. And if he had inquired around about Tucker as much as he might have, he would have known that when Tucker runs down to Bayville a dozen times or so in the fall for duck shooting his family has no car at all for two and three days at a time—another new thought.

"Henry, what this business needs these days is more salesmen like the eloquent gents who used to sell lightning rods. Back in my old home county they sold everybody but Deacon Simpkins, who was deaf and couldn't hear thunder, and his wife was blind and couldn't see lightning. After a dozen or so of these agents had worn down the Simpkins' doorsill without getting his name on the order blank a fellow came along and got Simpkins to tell his wife how awful lightning looks and Mrs. Simpkins to tell the deacon how terrible thunder sounds. You know the rest. He had a new thought. He quit talking about lightning rods and got his prospects talking about the thing lightning rods were supposed to protect you from.

"Too many of our interviews between the salesmen and the prospect degenerate into a monologue like—like—"

Reilly didn't often have to grope for an illustration and Bennett seldom came to the rescue if he did, but it happened this time.

"Like the minister who says 'Let us pray,' and then gets up and does the job all by himself."

"Sure, something like that," agreed Reilly. "The salesman fails to bring a new thought to get the prospect talking and the prospect, being a bum listener—like the rest of the human race—holds up the stop signal. Then it's all

over but the report card and the 'Refused to talk' inscription that ought to read, 'Refused to listen—to the same thing he refused to listen to a week ago'."

"Looks kinda hopeless," Bennett mused, talking half to himself, half to Reilly. "Our salesmen are a pretty good crowd and—"

"Sure, they're a good crowd and so are the boys at the Sennett but they can't go it alone. They can't pick ideas out of thin air. You've got to take your morn-

ing conferences and make something out of them. Get every man to repeat, as nearly as he can, the conversation that turned the tide on his last sale. Get them to reading the tour news and the fishing and hunting news and the personal and social news for hints on things that may interest their prospects. Get them thoroughly posted on vacation resorts and road and scenery conditions within touring range of town. Get them to read the newspapers and magazines, not merely for entertainment but for informa-

tion about affairs that will start two-sided conversations with business men."

Reilly looked down and spied his shining shoes. "And Henry," he concluded, "put a spirit into those morning conferences that will give your men a smile something like the smile of Tony and an ambition something like the ambition of Tony. For Tony sure is going to sit some day under his own vine and fig tree, maybe in Sicily, but just as likely as not out here in East Callawassa."

San Francisco Dealers Putting Over Big Bridge

SAN FRANCISCO, Aug. 18—Due to the ceaseless efforts of the San Francisco Motor Car Dealers Association, later aided by the other automobile organizations, and the business and commercial clubs and societies of San Francisco, Oakland, Alameda and Berkeley, the need of a bridge, some six miles in length across San Francisco Bay, seems about to be filled. Raising about \$20,000 among its own members, the motor car dealers brought James Viponi Davies, tunnel expert, of New York, and Ralph Modjeski, bridge engineer, of Chicago, to San Francisco, and obtained from them a complete survey, estimate and report on the feasibility of such a bridge, the type of construction best suited to meet the problem, and the cost of the entire project.

The plans for the proposed passageway across the Bay are to be submitted to the war department for approval, as soon as detail surveys have been made.

The present traffic in automotive vehicles across San Francisco Bay is estimated at approximately 750,000 annually, while 50,000,000 persons also are carried on the ferries. Traffic engineers declare that the 20-foot roadway through the tube will handle this automotive traffic, if it is "kept moving," but that within the next five years, another roadway of similar size, in a tube, probably will be necessary beneath the Bay. Instead of doubling the width of the road-

way, however, it has been thought best to make provision of an auxiliary tube, in order that traffic may be handled through two terminals instead of one, on the San Francisco end, thus reducing congestion, and giving terminal facilities in two separate sections of the San Francisco business district.

The estimated cost of the tube-bridge-trestle-mole combination is \$40,000,000, of which about \$4,000,000 will be expended for land, condemnation suits and similar costs, and the remainder for actual construction. Davies and Modjeski announced their belief, in their official report, that the bridge would pay for

itself eventually, and produced figures, based on ferry transportation records across the Bay, that after the third year, the bridge would pay for its own maintenance and operation, and provide something over for a sinking fund with which to pay off the cost. These experts estimate the cost of maintenance, insurance, depreciation and operation of the bridge at \$3,050,000 a year, and that the first year's operations of the bridge will pay \$1,250,000 of this, the income steadily increasing until the fourth year when the income will exceed maintenance and operating expenses by a considerable sum.

Field Representative Helps Distributor's Dealers

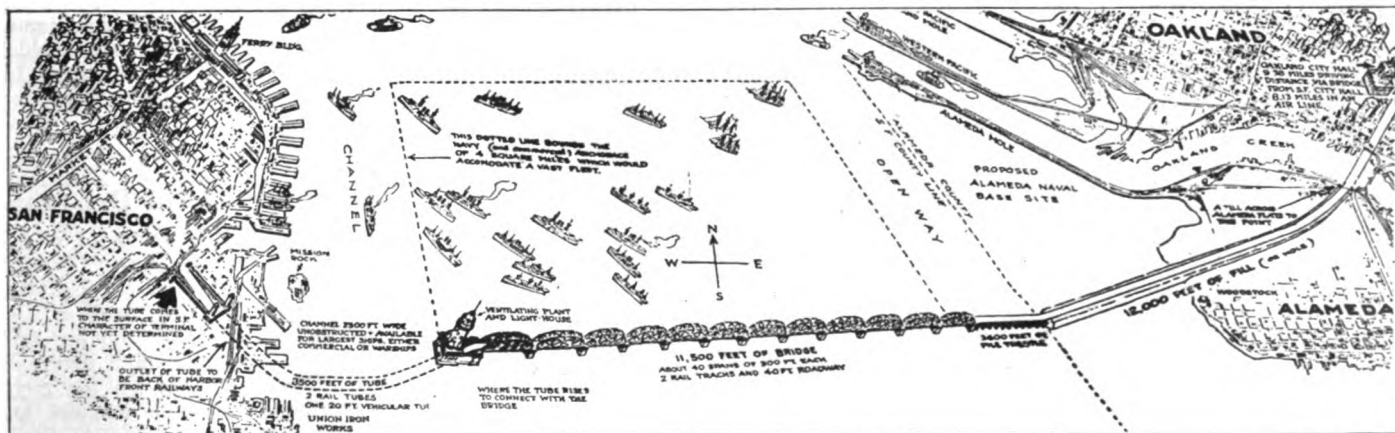
BY up-building the morale and securing close co-operation of its sub-dealers, the L. & H. Motor Co., Hupmobile distributor in Hartford, between Jan. 1 and July 20, 1921, has moved more cars than in the entire year of 1920—making a sales record that passes the 200 mark.

This close co-operation of the sub-dealers is secured through a field representative who drives from one dealer to another assisting in the closing of particularly hard sales, getting accounts into shape, helping the office manager and, wherever possible, giving real selling and management talks to the dealers. The sub-dealer who finds himself in

a tight place has only to advise the Hartford office and in a few hours, sometimes less, the field representative is with him.

Another means of welding the co-operative effort of the sub-dealers more strongly was an outing of the entire sales and service forces recently held. There was an automobile parade in which Hupmobiles of all ages participated and the procession also went to various towns for the benefit of the sub-dealers. L. & H. desire to make 1921 a record breaker. They know where there is plenty of business and they are going after it.

This Bridge Will Help 'Frisco Dealers Sell More Cars



This \$40,000,000 project is the outcome of the San Francisco dealers' efforts to secure better motor transportation facilities in their city. In Motor World, June 29, was told how the dealers aroused the city to the need of this bridge with an advertising campaign. Maybe your city has a condition that is a sales resistance factor. Maybe it needs to be awakened as San Francisco was



Dollar Ideas

Earn a Dollar

MOTOR WORLD will pay \$1 each for ideas for this department. The ideas should have to do with sales and business management. The idea should be in two parts:

- 1—The problem.
- 2—The solution.

But if you'll get the idea on paper in any fashion whatsoever, we shall be glad to shape it up for you. Do two things:

- 1—Help some other man.
- 2—Make a dollar for yourself.

Unique Method of Addressing Circulars Is Successful

A **UNIQUE** method of addressing circular matter was used by the Dunlap Motor Co., Ames, Iowa, in advertising a Tall Corn Week which they conducted recently. This is an annual feature with this dealer at which time prizes are offered for ten tallest stalks of corn entered in the contest. Every farmer in the territory received an advance announcement and also a report of the prize winners. Instead of putting each farmer's name and R. F. D. address on the envelope, which would have resulted

in quite a few errors due to changing tenants, a rubber stamp was used to indicate the route number, box number and town, which were written in. This insured the circular reaching the person occupying the farm.

There are four routes out of Ames, and assume for example that there are 125 farmers on Route 3, the envelopes would be addressed by filling in the blank spaces as follows: Route 3, Box 1; Route 3, Box 2, and so forth for each box on the route. Similar stamps were provided for other post offices in the territory.

The winning stalk of corn was 14 ft.

9 in. high. The prizes consisted of varying quantities of lubricants ranging from five gallons of oil for the first prize down to one pound of cup grease for the tenth prize. The contest aroused a great deal of interest and helped to spread the gospel of power farming for the winners of the first five prizes were tractor users.

"Reader" Used Instead of Display Ad

THE Northern Indiana Motor Car Co. of Fort Wayne, Ind., recently decided to handle Studebaker cars exclusively and in making the announcement of this decision to the public the concern used a reader instead of a display ad which chattily told about the proposition in these words:

"It is becoming more apparent each year that the more successful automobile dealers are those who confine all efforts to one make of car.

"Our constant growth in size and the demand for the new Studebaker bring us to realize that in order to carry out our well established sales and service policy we must concentrate our efforts in one direction. In making this decision we but follow the precedent established by some of the greatest automobile merchants in the world, and by having one organization of mechanics and salesmen we can render that better service which has been the ideal of the Northern Indiana Motor Car Co. since it was organized."

Rewarded Careful Drivers

MORT H. ZUCKER, manager of the Stewart Products Service Station in Des Moines, secured liberal publicity recently by co-operating with a Des Moines daily newspaper in finding each day the most careful woman driver in the city. The traffic cop on the city's busiest corner named the winners and Zucker presented each lady with a Stewart searchlight. The story was featured on the first page each day with pictures, and in every story both Zucker and his concern was given liberal attention.

"Saving Sam" Window Display



Out in Los Angeles, the Western Auto Supply Co. has built up a big accessory trade and no small part in the firm's activities has been played by a miniature figure known as "Saving Sam." Here we have a window display that is far superior to those customary with the sundry dealers, because the message is put over by means of an attractive outdoor scene with Saving Sam enjoying the picnic. Note the absence of piles of accessories and the familiar price signs

A Plan to Help Move the Used Cars

IN order to encourage all employees to co-operate in accelerating the movement of its stock of cars, a Seattle distributor pays \$10 to any employee of the house for each new and used car prospect turned in that is subsequently sold.

Announcements displayed in all departments read as follows:

"We have a large list of used cars all in absolutely first-class mechanical condition and some of them are really fine buys. To every employee of the house, \$10 will be paid for all new and used car prospects they turn in that we sell cars to.

"Talk to all your friends—tell them about the used cars and you will be surprised how easy it will be to make from twenty to thirty dollars a month additional, merely by using your spare time and reporting the names to the sales manager."

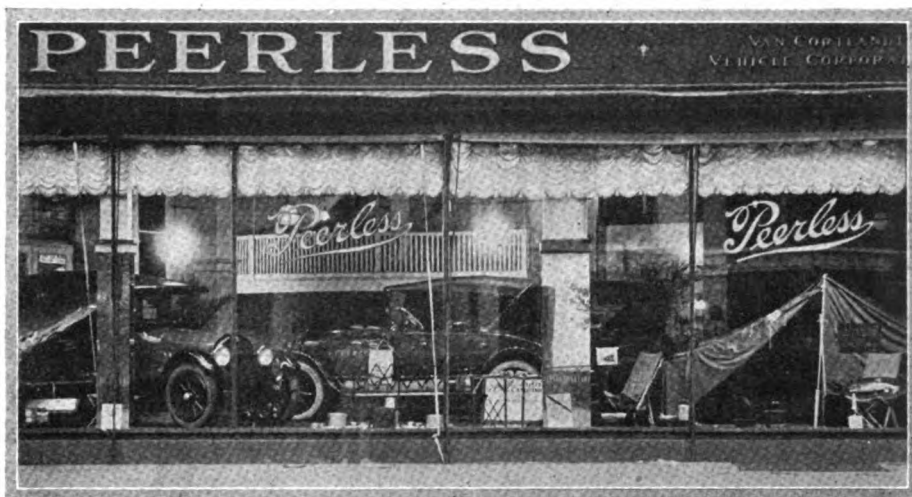
Here's A Display That Sold Cars

SEVERAL car sales are directly traceable to a camping window recently shown by the Van Cortlandt Vehicle Corp., New York distributor for Peerless. The window display was accompanied by a newspaper advertisement, circularizing, posters, pamphlets, etc. Publicity and pictures of the window were sent to the

newspapers, some of which printed them. Through a special arrangement with the dealer who sells camping equipment the Van Cortlandt salesmen were given a liberal commission on all outfits sold and several of the salesmen made a nice little bonus in addition to their commissions on car sales. The dealer who sold camping outfits also assisted in the campaign

and among other things circularized a collective list of doctors and lawyers with a letter telling them of the local Peerless dealer which showed the camp and touring outfit attached to a Peerless Eight, and they were invited to call. This form of sales effort was particularly effective in Newark, Paterson and some of the other cities in the metropolitan zone.

Salesmen Sold Cars and Camp Equipment



Here's a summer selling idea that was a big success. The Van Cortlandt Vehicle Co. of New York arranged a camping window to sell Peerless cars and the salesmen got a commission on camping equipment also. Several combination sales were made

The Accessory Merchandiser

How a Dealer Analyzed His Territory for the Sale of One Accessory

WITH almost as many kinds of stop signals as cars on the market, the average dealer is somewhat stumped in picking the best-selling types. E. M. Thom, Cleveland accessory dealer, made a personal inspection of stop signals on cars parked in a large amusement park, at a marketplace and in a downtown business district on three recent occasions, noting on a scratch pad the make and model of car and stop signal. Three makes of signals (two high-priced and one medium-priced) were found on 86 per cent of the 175 equipped cars observed. These three were all of the lettered tail lamp variety, two of them operating automatically. Low-priced and vague, complicated, or small stop signals were rarely seen. Only two of the leaders were carried in stock, so the other was added. Two more which had been stocked were found on only 6 per cent and 2 per cent of the cars, respectively. These were dropped. Inclosed cars, averaging about \$2,600, were the most generally equipped with stop signals, with roadsters and sport models of about \$1,400 cost running second. The highest priced signals were not confined to costly cars. The effort of the tabulation was slight, and it

proved a helpful means of determining what to sell and whom to sell on stop signals "while the selling is good."

Tucson Dealer Association Puts Its "Gas" on the Map

TUCSON Motor Trade Association, which has entered the gasoline jobbing business after fruitless efforts to secure better and cheaper gasoline for its

This fuel, according to the Tucson Motor Trade Association, "has a jolt like a Missouri mule and the hotter under the collar it gets the harder it can kick." The white mule on a green background is used on all tanks where the gasoline is sold. Two-page advertisements in local newspapers are telling readers where White Mule gasoline may be purchased, with maps showing the location of the stations.

Profit in Hood Fasteners

UNSATISFACTORY hood fasteners are still so common that there is a good replacement business in this line for the garage or dealer offering something better. A Cleveland dealer stocked three dozen sets of fasteners (four to a set) of an improved type introduced by a Chicago jobber recently. Sales helps furnished with the outfit included a "life-size" cardboard bonnet side with popular size metal clamps and brackets on the same for display on the accessory sales counter. The initial order went in about ten weeks. A good handy man, with portable electric drill, chisel, files, hammer and a few assorted copper plates and rivets (for repairing or reinforcing sections of the bonnet affected in making the change), took care of the installations at a charge averaging \$1.40 per car. The clamps and brackets ranged from \$2.50 to \$7 per set of four, retail, and carried an unusually good discount.



The Tucson dealers' gas sign

customers, has adopted a trade seal. To put it on the map in the territory they called the gasoline "White Mule Gasoline, the Gas With a Kick," and put most of the eloquence in description of the gas in the pose of the mule.

Editorial Observation

A Sales Resistance Factor

AT this time when every factor that acts as a sales resistant is being closely scrutinized the mounting cost of automobile insurance is one of serious concern. When an ordinary owner is compelled to pay several hundred dollars a year insurance, in addition to the regular garage and upkeep charges on his car, he is apt to count his resources more carefully before buying the next car. Especially is this true since insurance rates give no indication of having reached a maximum.

It costs more than \$150 a year in one city of 175,000 to insure a well-known car for theft, fire, liability and collision. That is enough to make a man think twice before buying. It's high time the problem was considered all along the line, from manufacturer to owner.

The N. A. C. C., expressing the views of the manufacturers, feels that the reason for high insurance rates is "the loose methods of accepting risks" by insurance companies. It has been the practice to write fire and theft insurance up to the full value of the car. Since continual depreciation is apparent, this practice makes it actually profitable, sometimes, for a man to have his car stolen. The finding of more than 30 cars in an abandoned quarry near Chicago emphasizes this phase of the situation.

The attitude is that the insurance companies care chiefly about writing high insurance amounts because the higher the amount the greater the broker's commission.

However, examination of the situation indicates that there is something to be said on the other side of the case. As insurance rates rise a greater sales resistance is created for the insurance companies as well as the automobile dealers. Some of the insurance companies realize that lower rates would probably mean the writing of a greater amount of insurance and they claim that they are constantly striving for minimum rates.

The fact remains, despite these claims, that insurance premiums are constantly rising and that the situation has reached a point where it must be seriously considered by the automobile industry as a factor of sales resistance.

A new type of policy is being written by the so-called conference companies which is claimed to be a step in the direction of removing the incentive to dishonesty. This is the non-value policy which insures a car without naming a definite value. When loss occurs under this policy the value is determined by the used car value of the car.

Liability coverage continues to be one of the most important phases of automobile insurance both from a financial and human standpoint. The figures for one of the larger companies run about like this:

The cost per liability in 1918 was 24 per cent greater than in 1917.

The cost per liability in 1919 was 45 per cent greater than in 1917.

The cost per liability in 1920 was 60 per cent greater than in 1917.

The increased cost has been influenced considerably by the increased amounts awarded by juries to injured persons in liability suits.

Among the chief faults attributed to present insurance methods is that of failure to properly consider the moral hazard when writing insurance and of failure to properly investigate claims after accidents have occurred.

There is much to be said on both sides of the discussion of the mounting insurance rates. It is a subject that strongly recommends itself to the consideration of men in all branches of the industry.

Climbing insurance rates as a factor of sales resistance must be removed.

A Bank's Opinion

WHAT one of the world's greatest banks thinks of the automotive industry is being presented to the New York public in large advertisements of the Guaranty Trust Co., which says:

FUNDAMENTAL BUSINESS FACTORS

Picking Up Speed

The retail sales of automobiles throughout the country in June exceeded those for any previous month this year.

Production of the automotive industry during the second quarter of this year was 87 per cent of the corresponding period of 1920, which was the greatest production period in the history of the industry.

The automotive industry ranks second in the value of products, according to the latest United States census of manufactures.

More than a billion dollars are directly invested in the motor vehicle manufacturing business. The value of cars and trucks, parts and accessories produced, and tire replacements in 1920 aggregated more than three and one-half billion dollars.

The taxes—Federal, State and municipal—paid by motor vehicle owners in 1920 amounted to more than three hundred million dollars.

There were nine and one-quarter million motor vehicles registered in the United States on July 1, 1921, a gain of more than one million three hundred thousand in one year.

The general utilization of automotive vehicles has been the chief factor in increasing our gasoline production sixteen hundred per cent and rubber production more than six hundred per cent in the last twenty years. The automotive industry used in excess of one million tons of steel in 1920.

The gradual and substantial improvement of this industry will be a constructive factor of great importance in the revival of business generally.

Guaranty Trust Company of New York.

What does your banker, all the bankers of your community, think of the automotive industry? What would they think of the opinion of the Guaranty Trust Co.?

Perhaps this opinion would be worth reproduction in your advertising as a dealer.

Somebody's ancestor, who wrote "O, why should the spirit of mortal be proud?", never owned a new sedan.

LETTERS *from* READERS

Bring Down the Hotel Rates

Manufacturers' Agent Takes Up Campaign Which Manufacturers and Jobbers May Find It Worth While to Emulate

Recently Motor World commented in several articles on the high cost of keeping traveling salesmen on the road, particularly with hotel rates remaining at wartime levels despite decreased food and labor prices. In these columns also was announced the action of the Automotive Equipment Association urging its members to bring pressure upon the hotels patronized by its travelers to bring their rates down. An aftermath of these articles is the following letter:

Editor Motor World: I read an article in your magazine which leads me to send you the enclosed letter which we are sending, not only to all the hotels at which our men stop, but to every one of our customers.—B. M. Asch, Asch & Co., Manufacturers' Agent, New York.

Enclosure:

Due to the enormous cost of keeping our men on the road, we are compelled to change our selling methods to conform to the times. In spite of the fact that food costs have dropped over thirty per cent, prices on many bills of fare remain prohibitive. While all equipment such as is used in hotels has been considerably reduced, while wages are no longer at top notch—when help can be had without any difficulty—still many hotel men ask much more for a night's lodging than is commensurate with the cost.

Our good President is helping along reduced railway fares. Road expenses must be reduced or the day of the traveling salesman will be a thing of the past.

Many hotel men, realizing that business is not all it was 18 months ago, assume that more intensive selling will be necessary. On the contrary, increased cost of doing business will make it more profitable to do less business and conserve expenses.

A few isolated hotel men realize the trend of the times, and are offering fair rates for both food and lodging. They realize that unless salesmen can be more economically traveled, they must be recalled from the road. Salesmen are either working for less money, or losing their positions. We are going to take the course that unless we can travel at somewhere near the cost of 1917-1918, (when expenses outside of railroad fares was 50 per cent less than to-day,) we will cover the territory far less frequently, and rely on Uncle Sam who still charges only two cents for carry-

ing our message. On the trips we do make, we will not patronize those hotels which are charging exorbitant rates.

When the traveling expenses are again normal, we will resume as in the past. No doubt other firms feel just as we do.

Copy of this letter is going to all the hotels our men stop at. What are the hotel men going to do?

Yours very truly,
Asch & Co., Inc.

Concerning Advertising

Editor Motor World: I have just finished reading, with considerable interest, "Local or Factory Advertising Copy," in the August 3 number, in which the views of the dealer and the factory are set forth. I am much interested in the mechanical end of the automobile and for this reason take more than usual interest in motor car advertising, and while both the dealer and the factory man have brought out some good arguments in the articles referred to, I think if there is any one thing that falls short more than anything else in the motor business, it is the advertising.

In fully 90 per cent of motor car advertising, too much is devoted to generalities, "Luxurious ease," "Beautiful lines," "Mechanical perfection," etc., which while doubtless pretty phrases, do very little toward interesting the prospective purchaser. There is too little effort to tell the reader any real facts about the car. The first advertisement I ever saw of the — car bristled with, "America's Incomparable Car," "Superlative Ease and Refinement," and similar bunk, none of which would have caused me to waste a stamp sending for a circular, had it not been for a line down near the bottom, "— motor." Right there I was interested, and I will venture to say that if it were worth the trouble to inquire of any — owner, that would be the only portion of the ad he would remember.

Take a recent magazine ad for example. Nearly the entire cover front is taken up with an advertisement of a popular and well built car, including an excellent illustration of the roadster, which in itself should tell the reader all he would need to know in regard to the beauty of the car. Yet the few lines of descriptive matter are given over to the beauty of the said car. There is not a word to indicate what kind of a motor

is used. I happen to know that it is a — which fact would eliminate me as a prospect, but which might be a point in its favor with someone who believes in this kind of motor.

There is a general tendency in motor car ads to carefully conceal the make and style of motor. Of course, many persons care little what kind of a motor is under the hood so long as the paint and upholstery look right, but the number of buyers who look to the mechanical end are rapidly increasing.

I have driven a certain light six motor on a three-day trip over rather rough roads and on checking up on my return found that I had averaged better than 17 miles to the gallon of gasoline. Discussion of this fact with owners of the same make of car brought to light the fact that I hadn't done anything notable and that several who kept record of their mileage were doing considerably better than this. Yet I have failed to note in any advertisement of this company that the car is in any way economical.

There are, I believe, two points in which local advertising can be made to yield an advantage over factory advertising, in spite of the advertising man's advantage of professional training. One is in regard to service. Although the experience of the average motorist would lead him to doubt this statement, there are actually a few scattered places throughout the country where one can get real service, and a few concrete facts in an advertisement regarding this service will be a great point in favor of the car handled, especially in the case of the prospect who has owned one or more cars. Another point which appeals to a limited few is the performance of the car advertised on well known local hills, etc., as for example the Uniontown three-mile hill in this locality. This hill is known all over the country and one concern makes a big point in their advertising that their car "takes the Summit hill in high." I know and you know that this car is geared 5 to 1, and it would be very peculiar if it would not take the hill in question on high, but gear ratios are seldom taken into account by the average prospect, so this is a good advertising point.

To sum it all up. I believe that advertisements would have twice the pulling power if readers were given more facts and fewer generalities. If the advertiser states, for example, that the motor in his car will develop 72 horsepower at 2600 r.p.m. he is giving the prospective customer something to consider, while if he follows out the usual custom and gushes forth about "Marvelous power and speed" he has not impressed anyone.—Pennsylvania.

A Department of

BETTER MECHANICS

Conducted by J. HOWARD PILE

No. 205

When asking for information, please state whether you maintain a permanent file of Motor World, as many inquiries are answered by reference to previous issues

Time Estimates on Studebaker Repair Operations

Factory Has Worked Out a Complete System with Forms, Schedules and Instructions for Keeping Accounts Which Makes It Possible to Estimate on Time and Parts Both, Giving the Customer an Estimate to the Penny

Part I—Forms and Workings for the System

THE Studebaker Corp. has for a long time been interested in flat rates and for a year past has had in operation a schedule of flat rates that has been prepared from results observed in many Studebaker shops covering thousands of actual operations. Conditions vary in the different shops depending on the equipment, the ability of the shop foreman and the workmen, but the estimates have been averaged up to amply cover the various operations under these different conditions.

For convenience, the different parts of the car have been divided into groups as Front Axle (Group A), Rear Axle (Group B), etc. These groups are then sub-divided into operations and the operations in each group numbered consecutively. In the original lists prepared by the factory, there are additional columns giving the list price of parts needed in the operation, the price for the labor and the price for the complete job. Owing to the variation in the price of both parts and labor as time goes on and the idea of making this schedule of permanent value to the repairman, these have been eliminated here.

In many instances it is possible to combine several operations in a group because when doing an operation, one or more operations can be done at the same time without duplication of work in assembling or disassembling the parts in that group. This makes the cost of the

combination of operations less than the sum of the cost of each separate operation. Under the heading of "Combined Operations," these are referred to by number and are considered the same as single operations.

Service Station Accounting

The forms used in this accounting are as follows:

No.	Name
808—	Order for Repairs
809—	Repair Job Order
810—	Repair Job Material Requisitions
834—	Shop Time Ticket
858—	Repair Job Envelope
1033—	Receipt for Delivery of Repair Job
1035—	Repair Job Estimate

For explanatory purposes, symbols are listed for various inventory, sales, and expense accounts.

Inventory

- A-6—Parts
- A-7—Accessories
- A-17—Oil and Grease

Wholesale Sales

- A-6—Who. Parts Sales
- A-7—Who. Accessory Sales
- A-17—Who. Oil and Gas
- 239—Sale of Productive Labor, Parts, etc.
- 240—Sale of Storage

Retail Sales

- A-26—Retail Parts Sales
- A-27—Retail Accessory Sales.

A-37—Retail Oil and Gas Sales

Repair Shop Expense Accounts

230—Productive Labor, includes wages of all men working directly upon repair jobs.

231—Parts and Material, used on repair job orders as per 810.

232—Non-Productive Labor, includes wages of shop foreman and men in the shop and garage not working directly upon repair jobs. (Clear distinction must be made here to see that only the non-productive labor of the repair shop is charged to this account, and not employees whose services are used in other departments of the business, which service has no relation to the operation of the repair shop. Salaries of Non-Productors of this class should be charged to the other salary accounts of the business.)

233—Shop Supplies, includes oil, grease, gasoline, paint, polish, waste, and all supplies (not parts) used in the shop and garage. Clear distinction here must be drawn between purchases for inventory account, so that the repair expense account is only charged with the actual supplies consumed in the operations of the repair shop.

234—Repairs, Tools, Machinery and Fixtures, includes all expense incurred in repairing old articles and cost of new articles when they replace worn out old ones.

Forms Used in Studebaker Flat Rate System

REPAIR JOB ORDER (Form 808 No. B809)
 Original, Duplicate, Triplicate. Includes fields for Owner, Address, Charge Per B-808 to, Productive Labor, Mechanic No., and a table for DATES AND HOURS.

PARTS AND MATERIAL USED (Form 810)
 (REVERSE OF ORIGINAL). Includes fields for REG. NO., PART NO., QTY., DESCRIPTION, PRICE EACH, and a table for COST.

JOB TIME TICKET (Form 834)
 Includes fields for Name, Clock No., Date, Repair Job No., Department No., Time Finished, Time Started, and Elapsed Time.

REPAIR JOB ENVELOPE (Form 858)
 Includes fields for CUSTOMER'S NAME and ADDRESS.

REPAIR JOB ESTIMATE (Form 1035)
 Includes fields for Owner's Name, Address, Serial, Motor, License, and a table for DESCRIPTION OF WORK NECESSARY, CHG. CUSTOMER, NO CHARGE, and POLICY.

REPAIR JOB MATERIAL REQUISITION (Form 810)
 Includes fields for R. J. O. No., Quantity, Lot No., Article, Cost, and Amount.

RECEIPT FOR DELIVERY OF REPAIR JOB (Form 1033)
 Includes fields for B-808 No., Date, and Signature.

ORDER FOR REPAIRS (Form 808)
 Includes fields for Owner's Address, Date Car Hand, Date Returned, Car Model, Car Serial No., Motor No., and License No.

B809 is the repair order in triplicate, the reverse side of the original also being shown at the upper right. B808 is the order for repairs made out in triplicate according to the customer's orders. The third copy has a claim check attached. B810 is the repair job material requisition. B834 is the job time ticket. B858 is the repair job envelope of manila. B1033 is the receipt for delivery of repair job. B1035 is the repair job estimate.

235—Light, Heat, Water and Power.

236—Shop and Garage Rent.

237—Loss on Repair Shop Estimate.

This account shows the difference between the estimate price charged your customers and the actual sales value of parts, material and labor used on the job.

238—All Other Items Not Classified Above.

Shop Time Accounting. Where shops use a time recording device or clock, two time cards are recommended. One form is made up by the shop clerk at the beginning of the pay period, and the employee stamps in morning and noon and out noon and night on this card, and the total time elapsed during the period is the amount for which the employee is paid on regular pay periods, and the amount of this labor for the mechanics is charged to 230 Productive Labor account, and must be accounted for on individual job cards.

An individual job card is furnished the employee each morning bearing his name and the job number on which he is to work. He stamps in on this card when he starts to work, and out when he leaves the job at noon and night, or when transferred from the job. If he works on more than one job on the same day, a card of this nature is turned into the shop time clerk for each job worked on during the day, and the total time accounted for must agree with the total time for the day for which the employee receives payment. In case there is any idle or elapsed time when the employee is working on miscellaneous work, such as moving equipment or cleaning the shop, this must be handled on a shop time card covering shop expense. Shop clerk must post the individual time cards to the B-809 Repair Job Orders Daily.

Accounting for Stock. Purchases of parts, accessories, oil, grease, etc., should be charged to the proper inventory accounts on the ledger, viz.:

A-6—Parts.

A-7—Accessories, Tires, Bumpers, etc.

A-17—Gasoline, Oil, Grease.

When same is sold (other than on repair jobs) the accounting is as follows: Item I—A-566 Pinion list price \$5.

Charge Accounts Receivable Customers \$5, credit A-26 Sales \$5, Charge A-26 Cost of Sales \$3.75, Credit A-6 Inventory \$3.75.

When parts, accessories, etc., are sold on repair jobs, the accounting is as follows:

Withdraw parts, etc., from stock on B-810 requisition, showing job number on which same are used and post stock so issued on back of B-809 Repair Job Order.

B-810 Requisitions should also be summarized numerically and each number accounted for. This summary should have a column for Req. No., Job No., A-6 Inventory, A-7 Inventory, A-17 Inventory, Freight, Tax, etc. The columns should be footed monthly and totals of same charged to account 231 Parts and Material, and credited to proper inventory account.

Repair Shop and Garage Pay Roll

(842). This form is made from Shop Time Ticket. Cashier shall charge the wages of producers to 230 and non-producers to 232.

Repair Job Estimate (1035). As the customer comes in he shall describe the work required on his car. It will be the duty of the service manager or repair shop foreman to refer to the Flat Rate Price List, and from same prepare estimate of cost on the job on Form 1035. If this meets with customer's approval, service manager shall write up Form 808.

Order for Repairs (808). This form is made in triplicate as the customer's order for work to be done and instructions to repair shop. The original after being signed by car owner or his representative is attached to form 1035 and delivered to service cashier who files same in Repair Job envelope (858). The duplicate to foreman of repair shop as

Part II, List of Time Operations, will appear next week

authority for issuing Repair Job envelope (809), then filed by repair shop by date promised and used as a tickler for service manager supervising the repair work in progress in the shop. The triplicate or cardboard copy, after tearing off perforated heading, is tied on the car. The B-808 shall bear an imprinted number and all numbers shall be accounted for, therefore, any spoiled copies must be preserved and forwarded to Cashier in envelope 858 bearing same number.

Repair Job Order (809). This form is made out in triplicate by the foreman of the repair shop and given the same number as the 808. The original cardboard copy used by the repair shop as authority for drawing material on 810 and as a work order. All material drawn by 810 is listed on back and daily all Productive Labor spent on the job, as per shop time ticket is listed on face. When the job is finished the original is turned over to the service cashier for pricing and invoicing and then placed in envelope 858. The duplicate is to go to the order register clerk for registering and will be held until the original comes through invoiced, when it may be destroyed. The triplicate is held by repair shop until job is finished whereupon it is sent to the service cashier for approval of delivery. The service cashier shall refer to original 808 for terms of the order and credit responsibility of customer, and if approved, shall fill in the space provided, and send same to the shipping clerk as authority for delivering the job. Upon delivery, shipping clerk shall sign in the space provided and return to the cashier. If terms indicate collection should be made before delivery, service cashier shall be responsible and see that collection is made before car is released.

Receipt for Delivery of Repair Job (1033). The shipping clerk (or party ordered to release job on order from

service cashier on triplicate 809) shall fill out Form 1033 Receipt for Delivery of Repair Job and secure signature of owner or his representative to same, forwarding to service cashier. This receipt 1033, original 808, and triplicate 809 shall then be filed in 858 repair job envelope.

After the job is completed and all material and labor items entered on 809 by repair shop, same shall be forwarded to service cashier who shall post amounts on same from original copy of 810, and shall indicate on 809 amount to be charged the customer as shown by agreement on 808.

Cashier shall accumulate forms 809, 1035, and all 810 requisitions placing them in envelope 858 and forward to biller.

Billing

Invoice should be made in duplicate, original (showing only a description of work performed and estimated price agreed on) given or mailed to customer. Duplicate bearing full details used as office sales record and posted to various ledger accounts.

After copying description of work and price on original, viz.:

John Hamilton,
142 West Fourth Street, New York.
Grease Universal Joints, eliminate short circuit and install new ammeter as per estimate\$5.93

Remove original from typewriter, and copy below on duplicate total sales value (not cost) of all labor, material, parts, etc., and adjust difference between such total sales value and estimate charged customer by a charge or credit to account 237, as the results may indicate. viz.:

Total sales value—Acct. 239...\$6.18
Estimated price 5.93

Acct. 237 Expense (Red if loss, black if gain)\$0.25

The above will prevent losses from underestimating being buried in shop operations and show manager monthly how near correct are his estimators.

It is optional with the dealer as to whether or not he desires to make the above distinction. In case it is satisfactory for such differences between estimates and actual sales value to be shown only in final shop results, then the estimated price only, viz. \$5.93 would be credited to account 239 repair shop sales to balance the accounts receivable charge.

Claims. Parts, material and labor given to customers on repair jobs as a matter of policy must be credited to shop account 239, and charged to proper commercial expense account to cover "Free Repairs," (Parts, etc., at actual cost, Labor at actual cost plus overhead).

Index of Repair Shop Customers (1034). Cashier will fill out a separate card for each customer of the repair shop, and will enter amount of completed job on back thereof, and file card alphabetically for future reference.

Credits. Manager and cashier will go over the cards and note on each card the credit limit allowed each customer.

Repairshop Shortcuts

No. 3020—Polishing Crank Throw Bearings.—Where a bearing has to be polished in a tight or awkward place, a piece of emery cloth is cut in a narrow strip, pieces of string tied through holes in the ends and the cloth wrapped around the shaft one complete turn.—William Bishoff, Gilbertson Motor Co., Iron River, Mich.

No. 3021—Protection for Finish While Removing Dents.—A piece of celluloid held beneath the hammer while pounding out dents protects the finish and usually insures the enamel staying on.—Donald McLean, Cleveland.

No. 3022—Zenith Carburetor Tester.—A manifold is mounted on a board with a tank and necessary tubing. The carburetor is then attached and the float level gage which is furnished by the carburetor manufacturer.—Charles R. Simmons, Chevrolet Motor Co., New York City.

No. 3023—Roller Bearing Sleeve Puller for Ford Axles.—The puller is made from two strips hooked at the end to get in back of the bearing. After the hooks are pushed in, a bushing forces them out behind the bearing and the screw jack on the front pulls the bearing out.—R. Biechlin, Enterprise Garage, Bushnell, Pa.

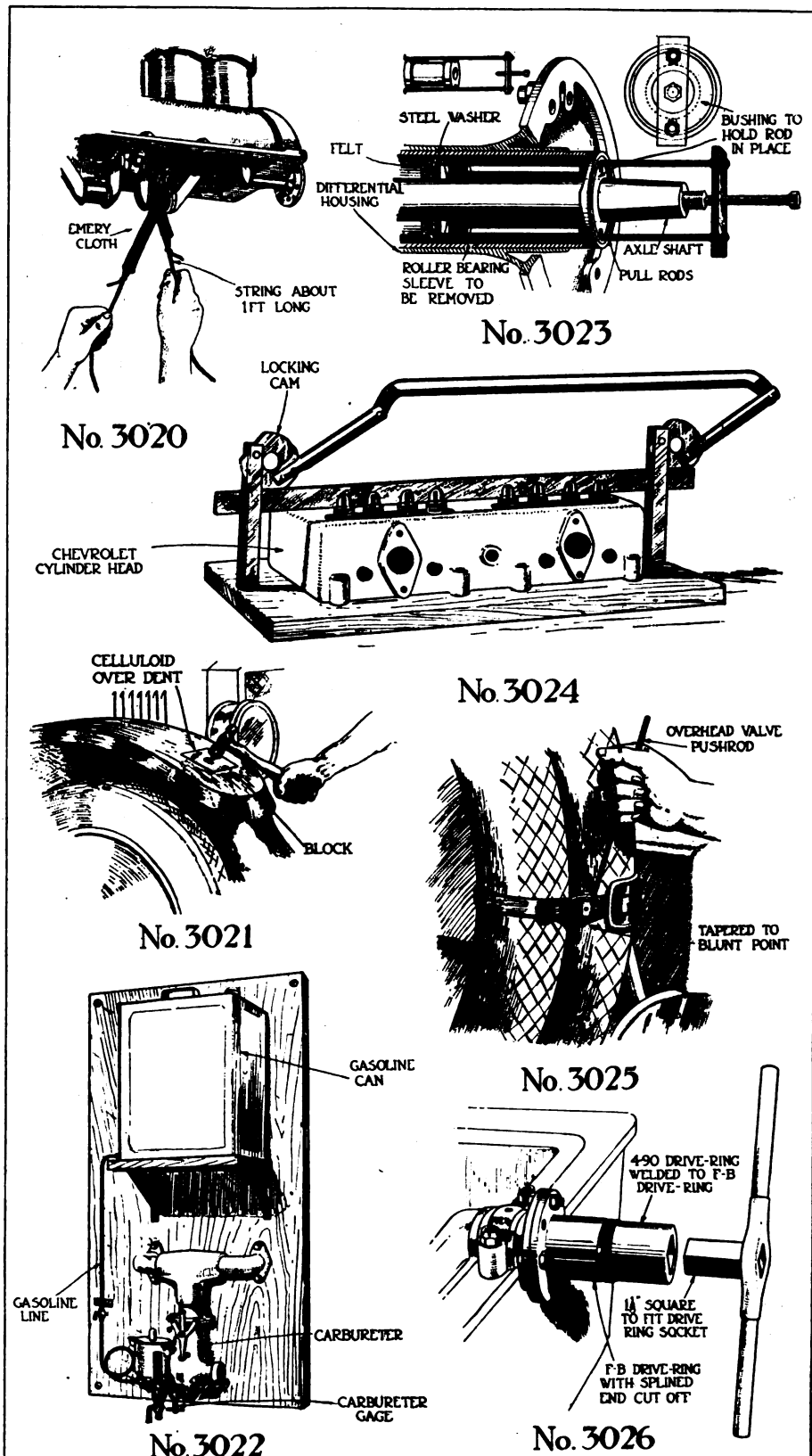
No. 3024—Overhead Valve Washer Depressor.—To depress the valve washers on all valves of an overhead valve engine at once, a frame is made to hold the cylinder head. The handle operates both cams, which are self-locking.—Charles R. Simmons, Chevrolet Motor Co., New York City.

No. 3025—Loosening Tight Buckles.—An overhead valve pushrod ground or filed down to a blunt point is useful for prying out the straps in spare tire buckles when it is difficult to free them by hand.—Donald McLean, Cleveland.

No. 3026—Chevrolet Crankshaft Turning Tool.—A Chevrolet 490 drive ring is welded to an F-B drive ring so that the tool will fit either engine. A wrench with square driver is used to turn the drive ring.—Charles R. Simmons, Chevrolet Motor Co., New York City.

MAKE A DOLLAR

SEND in a sketch and a description of the device you doped out to make your work easier. Motor World will pay a dollar for every idea accepted for publication.



SYSTEM IN BUSINESS

This Department Is Intended to Assist Motor World Readers in Working Out Their System Problems — It Will Answer Questions Concerning System and Accounting

Does Your Service Department Get a Square Deal?

This Story Tells How One Dealer Records His Job Orders So That Service Gets Credit for All the Work It Does

SERVICE is unpopular with some dealers because at the end of every year the service department shows up in red ink on the annual statement. They realize that they have to maintain a service department in order to sell cars, but if there were any way of getting along without it, they would be satisfied to let someone else assume the grief of keeping their customers smiling.

However, when it is considered that there are innumerable garages all over the country which exist largely on the profits they are able to extract from repairing and maintaining automobiles, it would appear that the trouble is largely due to the organization within the service station. The garageman must charge rates that will compete with those of the service station. Consequently the leaks that are present in the dealer service station must have been eliminated by the garageman.

Perhaps the most important reason for the difficulties experienced in making service pay is the failure to properly record interdepartmental transactions. In many cases the service station bears the expense of work from which other departments extract the profits. In fact, in some instances the service department does the work and the department for which it was done derives the entire income. Service is not even credited with the cost of the job.

Take the matter of preparing new cars for delivery. The service depart-

ment tunes them up, lubricates them and supplies gasoline so that the new car department may deliver the cars in perfect running condition. The cost of doing this job should be added to the expenses of the new car department and the service department should be credited with the expense it has been put to. Then again the service department is frequently expected to warehouse the new car stock free of charge. These are some of the things that eat up the income from service and make it difficult for this department to show a profit.

In order to make sure that the service station will get a square deal from the accounting department, the Stratton-Bliss Co., Dodge Brothers dealer in New York City, use a special form for summarizing and analyzing all service job orders. This form, which is illustrated at the bottom of the page, is contained in a large loose-leaf book, and postings are made in it from the copies of the job orders.

The job orders are entered consecutively, the numbers being placed in the first column. Next the amount is entered in the second or third column depending on whether it is a cash or charge sale. The customer's name or the department for which the work was done is entered in the fifth column. The entry of the ordinary job order covering the sale of shop labor, parts and accessories to a customer is handled in the following manner: The sale and cost

amounts of the labor, parts and accessories are entered in columns six to eleven inclusive, respectively. When the job order covers work done by the service department in preparing new cars for delivery, the service department receives credit for the cost of the labor plus an overhead charge in column six and a charge is made in column twelve or thirteen depending on whether the work is done on a passenger or commercial car. The service department is credited in the same manner for the replacement of damaged or defective parts and the debit is made in column fourteen, fifteen or sixteen.

All entries on this form, except those in columns seven, nine and eleven, can be checked up for accuracy. The sum of all the entries in the columns lettered A is equal to the sum of all the entries in the columns lettered B. This fact is evident when it is remembered that all sales made by the service department are entered in the A columns and that the entries in the B columns are merely the distribution of these items. The entries in the A columns are really credits and the B columns debits.

In this dealer organization, the service department is not asked to shoulder any expenses that do not belong to it. Summarizing and analyzing the job orders in this manner places the burden where it belongs. And the result is that this service station does not lose money. It is a profitable part of the business.

Form Used to Summarize and Analyze Job Orders

SUMMARY AND ANALYSIS OF JOB ORDERS										MONTH OF _____ 1921									
CUSTOMER'S RESPONSIBILITY		SALE PRICE		COST PRICE		SALES OF PARTS		SALES OF ACCESSORIES		PASSENGER CAR EXPENSE		COMMERCIAL CAR EXPENSE		REPAIRS		REPAIRS			
NO.	NAME	AMOUNT	DATE	NAME	AMOUNT	DATE	NO.	NAME	AMOUNT	DATE	NO.	NAME	AMOUNT	DATE	NO.	NAME	AMOUNT		
4268	59.76																		
4269																			
4270																			

The actual width of this form is about 25 inches. It is kept in a loose-leaf book. The entries are made in it daily from the job order form. It provides, in addition to its other function, a simple means of totalling up the day's business and classifying it

SCIENTIFIC CONSTRUCTION

GARAGES

SHOWROOMS

REPAIRSHOPS

Conducted by DONALD D. BLANCHARD

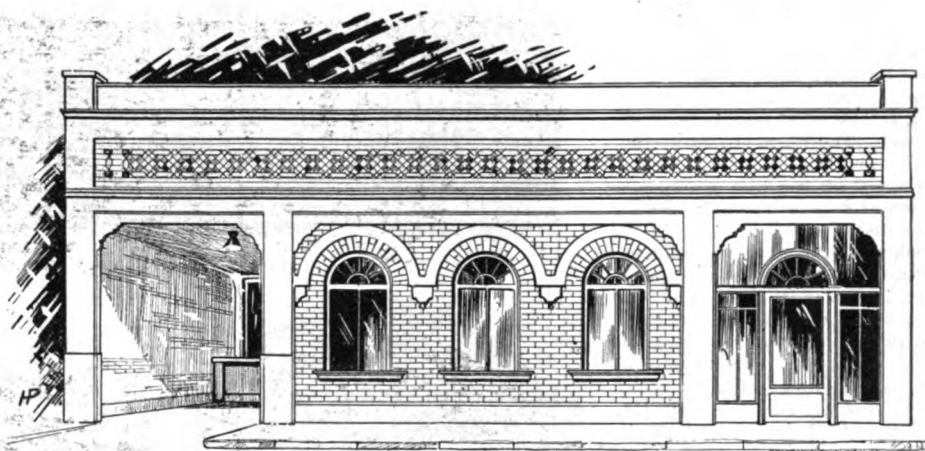
Jobber Building Should Have Salesroom

Display Will Help to Sell Goods at Wholesale and It Will Show the Retailer How He in Turn Can Secure Sales by Display

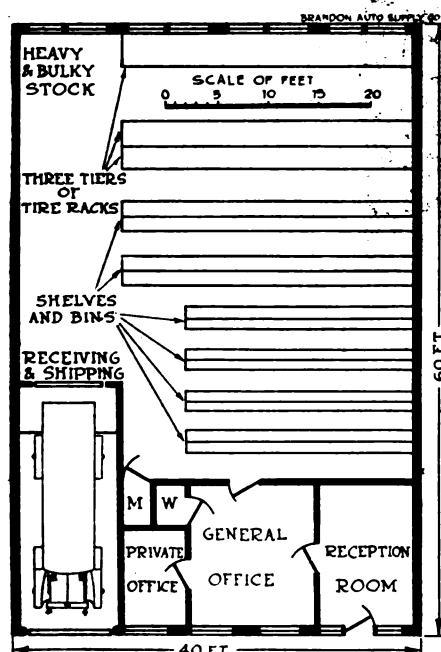
MOTOR WORLD is glad to receive and answer inquiries for garage plans, but in order that there may be as little delay as possible in submitting the plans desired it is imperative that the following information be given:

Size of plot, with rough sketch showing shape and its relation to adjoining plots; name and number of departments operated; number of cars to be shown in salesroom; number of cars in garage; any other pertinent details.

AS a general rule, we believe that the jobber building should have a salesroom and that a salesroom can be made as potent a factor in securing wholesale trade as in obtaining re-



The driveway at the left is arranged so that truck can back its tailboard right into the stockroom



No salesroom is included in this layout because of space limitations

tail business. From the standpoint of the jobber, the salesroom has two important advantages. First, it increases the salability of his goods by giving him an opportunity to display them in a manner that will be most likely to result in sales, and, second, it shows the retail merchant how to display his goods in his own store.

If the retailer is impressed with the utility or beauty of an accessory by a display in the jobber's salesroom, it will be easier to convince him that his customers will have the same reaction and that consequently the particular article offers him an opportunity for profit. The educational advantages of a salesroom are well worth while because any assistance that the jobber can give the retailer in moving his stocks is certain to have a healthy influence on the jobber's business.

Due to space limitations, it is not possible to include a salesroom in the building illustrated on this page. The entrance to the building is through a reception room and it would be a good idea to put some specimen displays here and perhaps a showcase. These displays would be useful in pushing certain lines

of goods and also in showing the trade how to display them. It is obviously important to change these displays frequently.

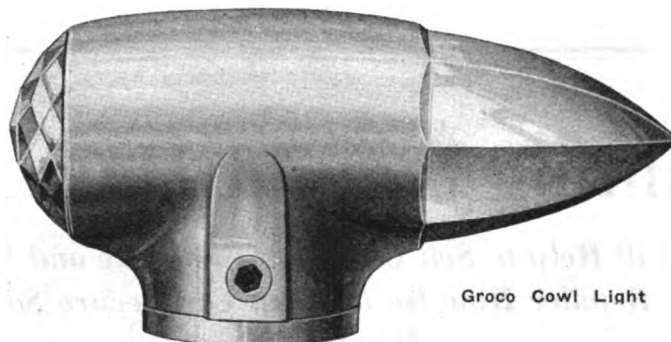
The general and executive offices are adjacent to the reception room and in back is the stockroom. The driveway at the side is arranged so that a truck can back its tailboard into the stockroom. This feature will help to reduce the cost of receiving and shipping goods which is an important item in the wholesale business. The stockroom is provided with shelves, bins and tire racks. The shelves and bins should be of various sizes so that all kinds of stock may be neatly stored. Having the aisles between the shelves all open on a single passageway on the left is another feature of this layout.

The suggested exterior for this building is distinctive as well as attractive. The driveway on the left is balanced by the entrance to the reception room on the right and both have the same general outlines which adds to the symmetry. The panel which extends across the upper part of the building might be worked out in either brick or tile, or it might be replaced by a sign.

Automotive Equipment

GROCO COWL LIGHT

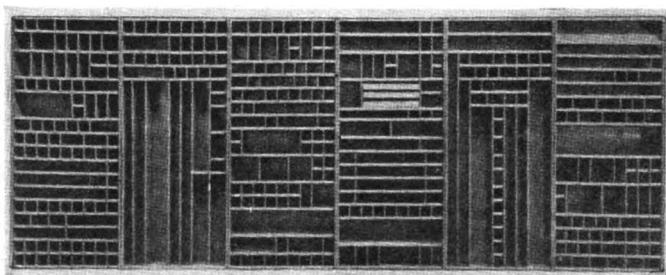
A small lamp finished in nickel with a white crystal protruding lens which is constructed so that the top may be removed for lamp renewal by turning set screw for which a special key is provided. The hexagon tail gives the lamp a trim appearance. These lamps are sold in pairs for installation on the front fenders or on the cowl. Price \$3.—General Machine & Specialty Co., Baltimore, Md.



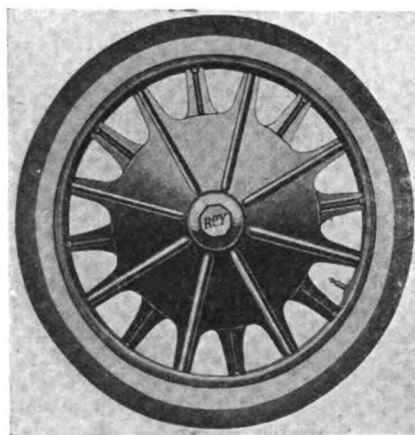
Groco Cowl Light

REY DISC WHEEL

The discs are solid to within $3\frac{1}{4}$ in. of the rim, at which point they branch into spokes, each disc having eight spokes, making a total of 16 spokes for each wheel. The discs are of a convex shape, so that when mounted on the hub the spokes cross at or near the point where the discs come together, the 8 spokes of the outer discs abutting an equal number of lugs on the inside of the rim and the spokes of the inner disc abutting on lugs on the outer edge of the rim. The tire or rim change can be easily and quickly made. Price per set for Ford cars \$54.—Rey Wheel Co., Detroit, Mich.



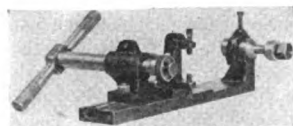
Lupton Parts Storage System



Rey Disc Wheel

MORENCO UNIVERSAL REAMER AND ALIGNING TOOL

The reamer is capable of adjustment to .0001 of an inch. Each reamer holder is furnished with several sets of blades, four blades per set, ten sets in all. Each set of blades will expand or contract $\frac{1}{4}$ inch. The connecting rod is held in the aligning tool during the reaming operation.—Moore Engineering Co., Hagerstown, Md.



Morenco Universal Reamer and Aligning Tool

SAF-T-VISOR

A universal visor which will fit the windshield of any automobile. It consists of a carefully finished piece of seasoned wood with metal fittings. The visor is enameled in black on the upper side and in dark green on the lower side. It is said to be rattle proof. Price \$5.—The Toledo Wood Products Co., Toledo, Ohio.

BINGO CELLULOID REPAIR KIT

This kit consists of a bottle of cement which is applied to strips of celluloid, the latter being placed over cracks or holes

in celluloid curtains. The two pieces of celluloid are then pressed together. A roll of celluloid is supplied with the kit which can be cut to proper size to make repair. It is supplied to dealers in cartons containing one dozen kits.—Manufacturers Distributing Co., 210 Lincoln Building, Detroit.

LUPTON PARTS STORAGE SYSTEM

The bins illustrated are designed especially for Ford service stations. The parts are grouped by assembly units—rear axle, front axle, transmission, steering gear, starter and top parts exactly as in the parts book. They vary in height and width according to the dimensions of the parts and quality required by the average monthly parts demand. Grouping them according to unit assemblies permits the quickest possible service and enables an inexperienced clerk to familiarize himself with the stock at once. The bins carry parts serial numbers. They are arranged in units 3 ft. wide and 1 ft. deep and 7 ft. high. They are shipped completely assembled and are ready for use as soon as they are uncased. They are made in various sizes for parts stock for Ford cars, trucks and tractors.—David Lupton's Sons Co., Alleghany Avenue and Tulip Street, Philadelphia, Pa.



Universal Circulating Pump for Fords and Fordsons

UNIVERSAL CIRCULATING PUMP FOR FORDS AND FORDSONS

This pump is placed between the water outlet from the cylinder block and the rubber hose leading to the radiator. It is driven by the fan. It is made of brass. Price \$10.—Universal Engineering & Mfg. Co., 1110 South Michigan Avenue, Chicago, Ill.

WESTINGHOUSE UNION BATTERY FOR FORDS

The new Westinghouse Union, 13-plate battery, to be known as the Ford Special, is designed especially for Ford replacement service. In the matter of design and material, the new battery is the same as other models manufactured by this company. Prices range from \$25 in the East to \$27.50 on the Pacific coast.—Westinghouse Union Battery Co., Swissvale, Pa.



Saf-T-Visor

THOMASON PISTON ALIGNER

A special tool for securing correct alignment of the piston and connecting rod assembly. Bushings are furnished which fit over the mandrel so that various sizes of connecting rods may be aligned. Price \$55. Bushings \$3 and up.—Shepard-Thomason Company, 506 W. Pico Street, Los Angeles.

NEW TOUQUET CARBURETER

This carbureter is of the plain tube, fixed adjustment type; it is of the two-jet design, having the main jet for high speed work and an auxiliary jet which is located directly in the opening of the intake manifold, where it is exposed at all times to the full suction created within the manifold.—Touquet Carbureter Company, Westport, Conn.

BEAR WHEEL ALIGNER

An instrument by which the position of the front wheels can be properly aligned with the rear wheels. The aligner is placed in the position as shown in the cut and the arrow and dial on each end show the exact position of each wheel. Price \$8.50.—Bear Mfg. Co., Rock Island, Ill.

ARROW PUMP

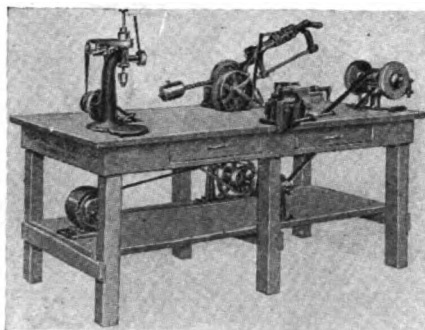
The feature of these pumps is the unique design of the packing gland and oiling features. By use of an oiling ring it is possible to place the packing gland between the hot water and the bearing, as the automatic lubrication insures sufficient oiling, and it is not necessary to have the bearing in contact with water in order to keep it cool.—Arrow Pump Company, Detroit, Mich.

WATERVLIIET SPIRAL REAMERS, FOR BUICKS

These tools are designed especially for repairing the Buick car. The king bolt bushing reamer is sufficiently long, so that both upper and lower bushings may be reamed in one operation. No. 45 is for five passenger cars, including D, F, H and K series for the years 1916 to 1920, price \$6. No. 49 is for seven passenger cars, including B, C, D, E, H, K and 21 series, years 1914 to 1921, inclusive; also five passenger models, 1920-21; price \$6. This reamer is also made with the pilot to insure perfect alignment; price \$9. The No. 18 piston pin bushing reamer fits all models from 1916 to 1920; price \$5.50. The No. 21 piston pin bushing reamer fits 1921 models; price \$6.—Watervliet Tool Co., Inc., Albany, N. Y.



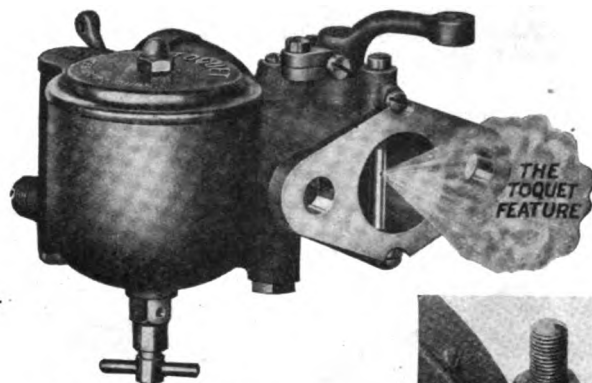
Thomason Piston Aligner



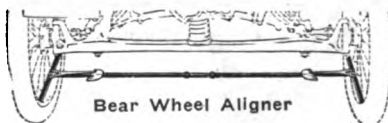
Myers Combination Work Bench



Hammerblow Timer



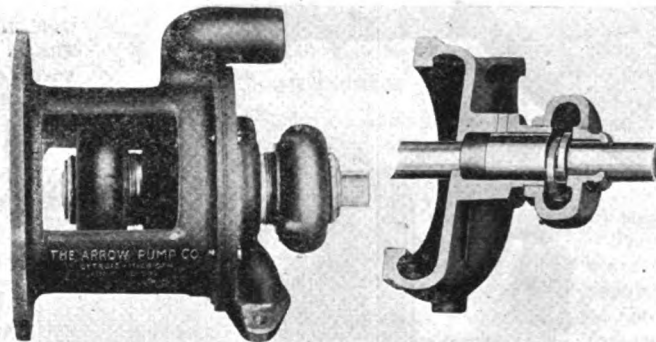
Touquet Carbureter



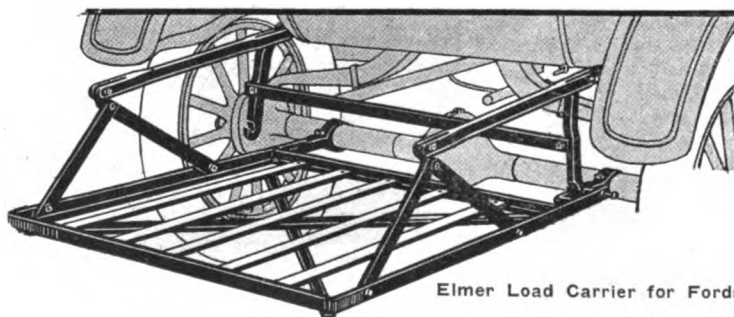
Bear Wheel Aligner



H. J. Z. Automatic Band Adjuster for Fords



The Arrow Circulating Pump



Elmer Load Carrier for Fords

MYERS COMBINATION WORK BENCH

The equipment on this bench consists of the following tools: Geared automatic hack saw, 6 in. x 6 in. complete with vise, 10 in. sensitive drill with table and $\frac{3}{8}$ in. chuck, grinder head equipped with one emery wheel and one muslin polishing wheel, 4 in. machinist vise with hardened steel jaws, countershaft and $\frac{1}{2}$ hp. electric motor. The table is 39 in. wide, 78 in. long and 33 in. high. It has two drawers for small tools.—Myers Machine Tool Corporation, Columbia, Pa.

HAMMERBLOW TIMER

The operation of this timer is as follows: A hardened steel rod, held in its place by a spiral spring, is pressed against another hardened steel stud when the cam actuating the instrument rotates. This insures a good contact and a quick break. The house is made of manganese bronze and the moving parts are of hardened steel. The instrument is put up in wooden boxes. Price \$5.—Pro-Mo-Tor Fabricating Corp., 182 Locust Ave., New York City.

CLERGLAS

This is a chemical which is applied to the windshield to prevent the formation of moisture which interferes with vision. It is put up in a form very much like a cake of soap. Price 50 cents.—Clerglas Chemical Company, Rochester, N. Y.

H. J. Z. AUTOMATIC BAND ADJUSTER FOR FORDS

This device is applied to the brake and reverse bands. Every time the brake is applied it automatically adjusts the band according to the wear. The installation of the device is said to be simple. Any excessive play is taken up automatically by means of the ratchet. Price \$4.—H. J. Zimmerman Company, Pekin, Ill.

ESTROM KANT KINK TOWLINE

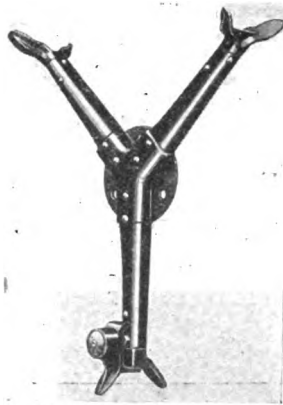
This towline is guaranteed not to kink or snarl. It is made of steel cable with manila rope slings. The length is 20 ft. The $\frac{1}{4}$ in. size sells for \$5.75 and the $\frac{3}{8}$ in. size for \$8.25.—Estrom Machinery Co., Cary, Ill.

ELMCO CARRIER FOR FORDS

The carrier is clamped to the axle and body frame and extends to the rear of the car. The capacity is 250 lbs. The vertical movement of the frame is said to produce an easy oscillating movement of the carrier, thus preventing jolting.—E. F. Elmburg Company, Parkersburg, Iowa.

OAKES TIRE CARRIER

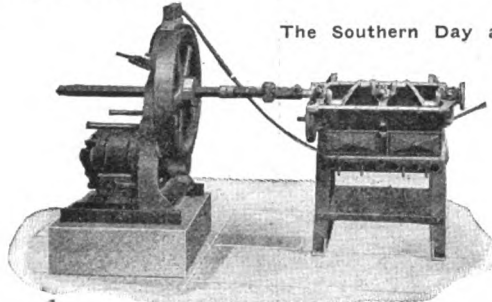
The feature of this hub is that it is interchangeable with the factory-equipped hubs used to carry spare wire or disk wheels. If wood wheels are used the carrier is bolted to the bracket so that spare rim may be carried. The carrier is made of pressed steel parts riveted together. A rim clamp is used on the lower arm to hold the rim. By loosening one nut, the rim is easily demounted. It is made to fit all sizes of demountable rims and in single or double carrier styles.—Oakes Co., Indianapolis, Ind.



Oakes Tire Carrier

ECO BURNING IN AND RUNNING IN EQUIPMENT

The equipment consists of a burning-in attachment and an engine stand. The engine stand is made of gray iron castings and is said to be strong and substantial. The burning-in attachment is made of channel steel and cast iron. The line shaft is made of tool steel and fitted with a universal joint. It is driven by means of an electric motor through a back gear with a reduction of nine to one. Price \$300. Western Mfg. Co., Okaloosa, Iowa.

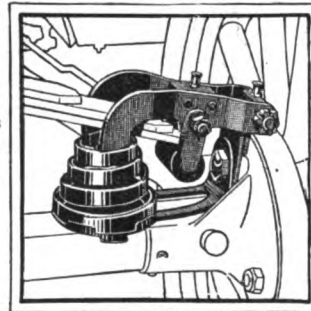
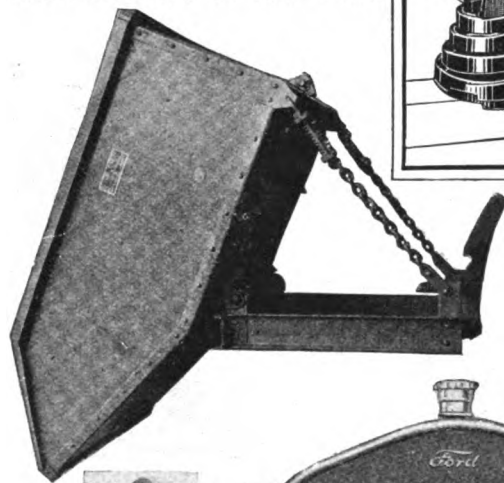


Eco Burning In and Running In Equipment

EASTON SCOOP BODY FOR FORD TRUCKS

This scoop body is of the self-dumping type and is made of steel throughout. It is furnished as a complete unit and can be attached or detached by means of four simple U-bolts. It is made of 1/4 in. steel plate with smooth rolled and welded steel reinforcing flanges around the top. The bottom is reinforced by angles. The sub-frame is made of channels securely framed together. There is room between it and the driver's seat on the chassis for an auxiliary body or box.—Easton Car & Construction Co., 50 Church Street, New York City.

Easton Scoop Body for Ford Trucks



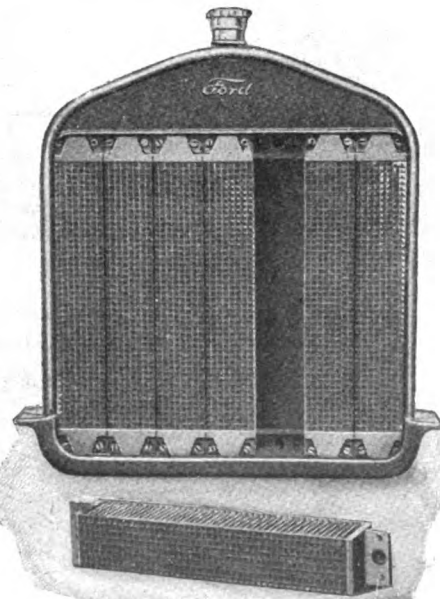
Cushion-Coils

ST. LOUIS VISIBLE GASOLINE PUMP

The most interesting feature of this pump is the pumping element, which consists of an adaptation of the rotary piston pump. The pumping action is said to be powerful and accurate. All straining screens are made of monel metal. The pumps are made in both hand and power operated types, the latter being a combination and so designed that the change from one to the other can be made instantly. It is claimed that this pump will deliver gasoline at the rate of from 20 to 25 gallons per minute. The unit is finished in red and black enamel. The glass measuring chamber has a capacity of 5 gallons. All working parts of the pump are accessible.—St. Louis Pump and Equipment Co., St. Louis, Mo.



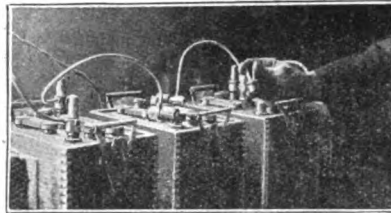
St. Louis Visible Gasoline Pump



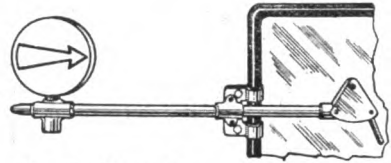
Sectional Radiator for Fords

ROSE EVERLASTING BATTERY CLIP

The clip is made of a special metal which is said to resist corrosion. The cable is heavily insulated and is cast into the body of the clip. The clip is so designed that it fits the different types of batteries now on the market. By pinching one end between the thumb and fingers the clip telescopes the post and when the pressure is released makes a firm connection. By compressing the small or pointed end it can be slipped into the female type of post and the tension released. It also fits cables and flat bars. Price \$3.25 per dozen.—Frank Rose Mfg. Co., Hastings, Neb.



Rose Everlasting Battery Clip



The Southern Day and Night Signal

THE SOUTHERN DAY AND NIGHT SIGNAL

This signal is placed on the left side of the windshield and is held in place by a neat bracket. The signal is made to fit any make of car, either open or enclosed. The target of the signal is operated with a small trigger which is directly in front of the steering wheel which turns the lenses 90 degrees in either direction. When in signalling position a small light automatically lights which illuminates the signal at night. Price \$15.—Southern Day and Night Auto Signal Co., 1443 McGee Street, Kansas City, Mo.

CUSHION-COILS

A shock absorber for the Ford car. They are made entirely of steel stampings with brass bushings and are provided with oilers at all moving points. They are finished in black enamel. Under compression, each coil of the absorber telescopes inside another. To check all upthrow, a special shoulder arrangement in the arch levers of the Cushion-Coils comes in contact with the under side of the Ford leaf spring at the instant of rebound, thus giving an automatic snubbing action. Price, \$21.—The Pressed Metal Mfg. Co., Waukesha, Wis.

SECTIONAL RADIATOR FOR FORDS

The core of this radiator is made in seven sections any one of which may be removed and replaced independently of the others. It is not necessary to remove the radiator from the car when a section is changed. A section is removed by taking out four screws after which it may be tapped out. In case of a leak, if no spare section is available, the damaged section may be removed and the openings plugged up. Honeycomb construction is used in the core and all parts coming in contact with circulating water are made of brass. Price—\$35.—Sectional Radiator Co., Inc., 514 West Forty-sixth Street, New York City.

THE LAW

By GEORGE F. KAISER

Perplexed?

Does some point of law perplex you?
Why don't you ask MOTOR WORLD's legal editor to discuss the question?

Questions Legality of Speed Law Enforcement

Editor Motor World: There is a condition existing in an adjoining town in which I was formerly a resident.

The burgess of the borough has turned over the trying of cases for speeding to the squire, who I understand pays the motorcycle policeman one dollar for every arrest made, and in writing to Harrisburg have been informed none of the fines had been turned in to the State.

The State law, section 29, second paragraph, states that when the rate of speed of any motor vehicle is timed on a measured stretch of road for the purpose of ascertaining whether or not the operator of such motor vehicle is violating the provisions of the act, such time shall be taken by not less than two persons, one of which shall be stationed at each end of such measured stretch, and no conviction shall be had upon the unsupported evidence of one person, and no such measured stretch shall be not less than one-eighth of a mile in length.

I know there are no two officers taking the time at each end of a one-eighth mile stretch, and the squire fines those who the officer states are exceeding the speed limit not over \$10.

Would there be any recourse by law in this respect—to get a refund of the fine?

The defendant on being asked if he wanted to plead guilty replied he did not.

Another matter—would there be any law of any State preventing us from putting up a sign reading,

SPEED TRAP—DRIVE SLOW

without any names on it but pointing toward the above-mentioned borough.—Subscriber, Rennerdale, Pa.

Answer: There are several ways of investigating this matter. A party who was convicted and fined might appeal, but that would, of course, necessitate retaining a local attorney and perhaps cost more than he could afford to spend in a matter of this kind.

Another way would be to write the Secretary of State or commissioner of motor vehicles, as the case may be, and see if any action could be stirred up in that quarter.

The third and the most practical way of handling a situation of this kind, to my way of thinking, is to try and interest some nearby motor club in the matter and then take the case up with the proper authorities as an organization matter.

If a situation exists such as you describe it is a matter of interest and concern to all the motorists for miles around. There is no good reason why any one man should bear the entire burden and expense of remedying such a situation. If a case like this is taken up by some nearby automobile club, the matter can not only be more easily handled as regards expense, but the prestige and reputation of the club naturally will cause those to whom a complaint must be made to give it fuller and more careful attention.

I do not care particularly for the wording on the proposed sign. I see no reason why motorists should not be cautioned to go slow because "the speed laws are strictly enforced in the town of _____."

No Certified Bill of Sale Needed

Editor Motor World: Please tell us whether or not we need to file a certified copy of the bill of sale we receive on buying a second hand car with the Secretary of State's office when we try to have the license plates transferred.—M. R. W., New York City.

Answer: Get forms at the New York City office of the Secretary of State and have them filled out by the buyer. No certified copy is needed.

Bottle in His Pocket, Car Is Confiscated

Although he carried a bottle of liquor in his pocket the Ford of an Alabama man was nevertheless confiscated, and his excuse that he carried it for use to help his "asthma" was not received by the Supreme Court of Alabama in the recent case of Black vs. State, 87 So., pg. 527. The court said the fact that he had the liquor in his coat pocket instead of in the car did not help him any so long as he had been riding in the car.

Alabama Gives Owner Proceeds of Sale of Confiscated Car

The Supreme Court of Alabama in a recent case decided that an automobile owner's car which has been confiscated for carrying liquor having been sold, the owner was entitled to the proceeds of the sale where it appeared he did not know of its unlawful use by a business partner of his, who used it to carry whiskey. Eckl vs. State 88 So. 567.

Motor Car Company Liable in This Case

That the chauffeur of a motor car company who took its sales manager home and then struck and injured a person while taking the car to the company's garage, and incidentally bringing an employee of the sales manager to her home, was acting for the company and by his negligence made it liable for the accident, was the decision of the New York Court of Appeals in the case of Clawson vs. Pierce-Arrow Motor Car Co. (May 31, 1921).

The defendant was a motor car manufacturer. Pratt, the manager of its sales department, was an invalid and used one of its cars to travel between his office and home with the company's knowledge. Sometimes after Pratt was left at his home the car was driven west to the factory and sometimes it was driven south to the garage. On the night of the accident it was being driven south.

On that night Pratt, after being brought home, told the chauffeur to take his wife's seamstress home. While doing this the chauffeur struck and injured another person, who sued. The court decided that the company was responsible as the accident occurred before the garage was reached at a point the chauffeur would have had to pass even if the seamstress had not been in the car.

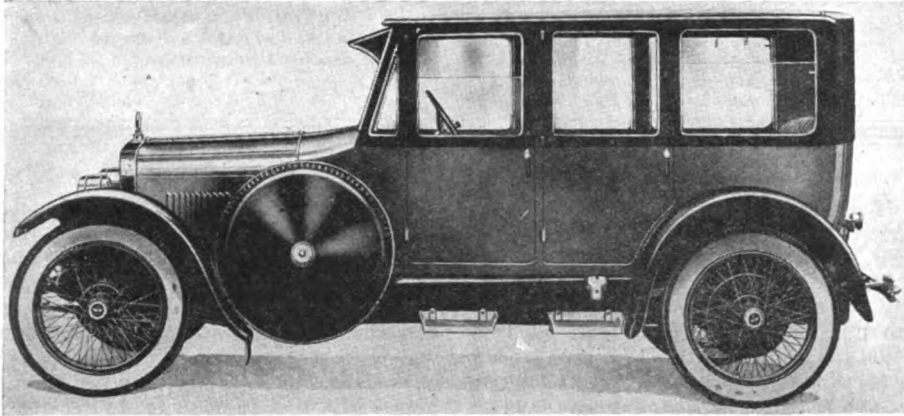
Idaho's Lien Law

Editor Motor World: Will you please give me the contents of the garageman's lien law of Idaho?—The Spencer Garage, Spencer, Idaho.

Answer—Glad to accommodate even in this warm weather!

The Idaho garageman's lien law provides that: Persons making, altering or repairing an article of personal property at the request of the owner have a lien for reasonable charges and may retain possession of the property. If the charges are not paid within two months, the garageman may sell the property at auction (public) on 10 days' notice after advertising in a newspaper in the county where the work was done, or posting a notice in three of the most public places in the county, if no newspaper is published there. Unless the garageman is a retired lawyer who went into the garage business because he found he could make more money as a garageman than as a lawyer, it is always advisable for the garageman to engage a lawyer to foreclose his lien for him.

Four New Bodies that Makers Offer for Fall

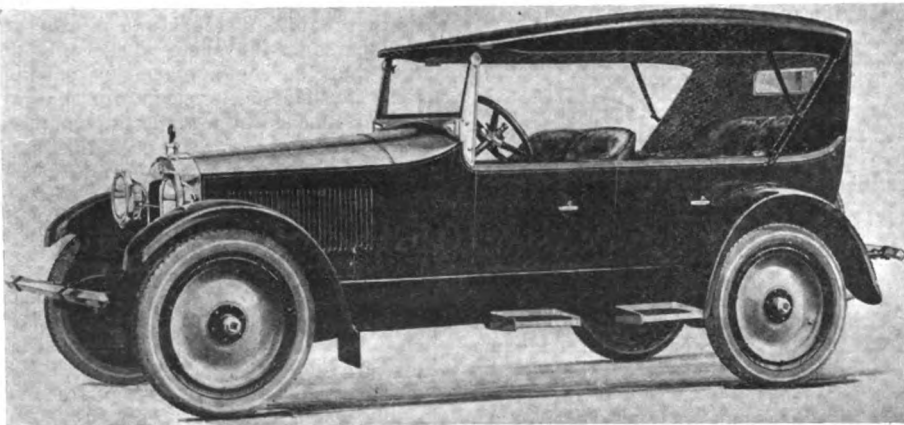


H. C. S. Now to Have Sedan Body, \$3,650

The H. C. S. Motor Car Co., Indianapolis, is now fitting the standard chassis with a sedan body, the job to sell for \$3,650. Standard colors will be Rolls-Royce blue, Liberty blue and carmine. Running gear and tops will be black. The job weighs about 3650 lb. The details of the chassis will be exactly the same as at present.

New Premocar Roadster, \$1,295

The large rear compartment is a feature of the new Premocar roadster, which sells for \$1,295. The seat is large and roomy, and there is a compartment behind the cushions for carrying curtains and small packages.

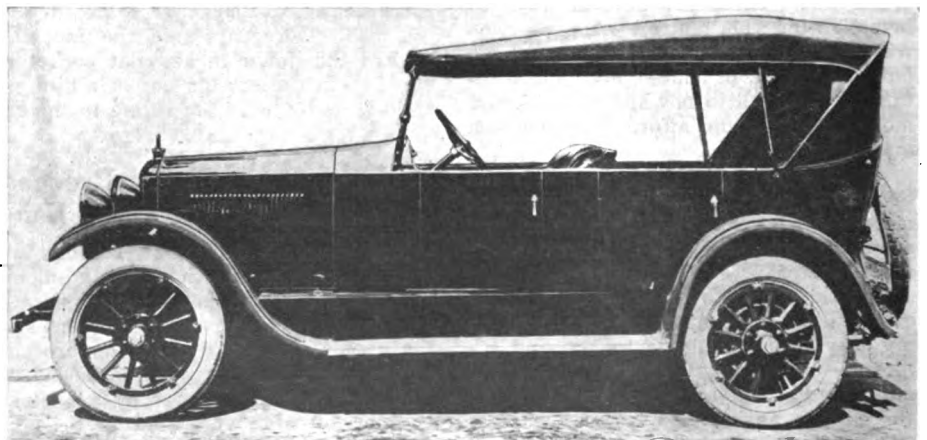


New Liberty Speedster Model, \$2,250

A new speedster of the sport type has been brought out by the Liberty Motor Car Co., this being especially notable for the appointments and equipment over and above the standard speedster model. The design of the windshield is very unusual, containing the side lamps.

New Auburn Model 6-51 Touring Car, \$1,695

The new Auburn model has a wheelbase of 121 in., but aside from this the changes are of a minor nature. Prices are, touring car, \$1,695; seven-passenger touring car, \$1,760; sedan, \$2,495; roadster, \$1,670; coupe, \$2,475.



Cletrac Has a New Model F at \$845

*Elimination of Main Frame, Smaller Engine, Lower Price,
Little Over Half the Weight of the Older Model Characterize
the Latest Design of Rollin H. White*

THE Cleveland Tractor Co. has been working for some time on a new model tractor and a new model cultivator and beginning Sept. 1 these will be in actual production. The new model tractor is to be known as Model F and it differs very radically from its predecessor. Generally the machine is very much smaller, in outside dimensions, engine size and weight. The price is over \$500 lower.

One of the features of the Model F is the elimination of the main frame. The engine, gearset and differential assemblies are so designed that they bolt together into one solid unit from front to rear. The resulting compactness has made possible the shortening of several of the outside dimensions.

The engine has four cylinders, $3\frac{1}{4} \times 4\frac{1}{2}$ in. and one of the unusual features is the use of four crankshaft bearings instead of the customary three. The gear case cover on the front which also acts as a supporting member for the power and driving units, incloses the gears of the water pump, fan, governor and magneto.

The gearset is made unusually accessible and the design retains the one speed forward and one reverse feature. The steering method of varying the ratios of speed between the two tracks is also retained, but the actual construction has been improved by the use of a cam and roller mechanism instead of the gear and screws. A new type of brake control utilizes both steering bands and makes unnecessary the addition of a third band and drum for braking.

The new model weighs but 1820 lbs., and measures 80 in. long, 50 in. high and 32 in. wide. The rating is two 12-in. plows at a normal speed of 3 m.p.h. The belt rating is 16 hp.

Tank-type design in its most modern form is found in the new Cletrac. The driving sprocket is located well up from the ground so that it is free from mud, grit or sand and the method of assembling upon full floating drive shafts running in double sets of annular ball bearings eliminates any necessity for adjustment. There are no other wheels.

Track shoes are cold formed from hardened chrome steel and so designed that they present a continuous solid tractive surface that keeps out mud and dirt and they free themselves automatically of any material which might work in and cause wear or breakage. They are joined with hardened pins and driven by hardened roller collars which mesh with the drive sprockets. There is one continuous cross grouter on each shoe to insure positive traction and prevent slippage.

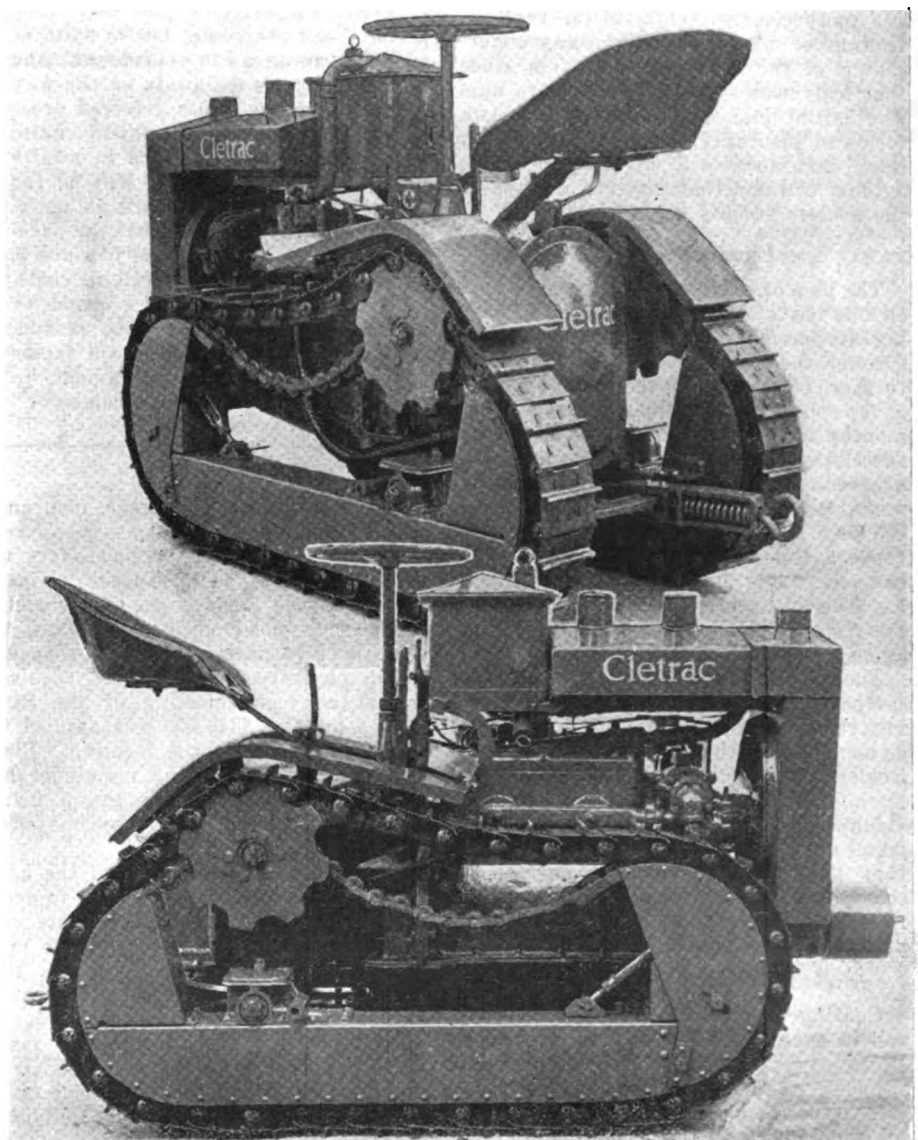
The method of supporting the tracks is also unique, embodying the principle

of the ball bearing with its resultant reduction in rolling friction. The side frames which are built up of heavy steel sheets welded and riveted into one solid piece, are provided with a hardened chrome steel channel throughout their entire length in which a roller chain runs freely. On the outside of this roller chain are the tracks which are so designed that they present a channeled surface to the rollers exactly corresponding to that in the side frames. The entire track assembly runs without lubrication and the only adjustment necessary, that of tightening the tracks, is made by expanding the front curve of the side frame with the turning of a single nut.

The new two row cultivator is so made that it can be attached or removed from the tractor in two minutes. The cultivator has a clearance of 30 in. so that it can cultivate corn up to 48 or 60 in. It is adapted for use with any standard shovel, sweep or weeder.

Lateral movement of the cultivating tools, ordinarily limited to a few inches each way, is unlimited in the Cletrac cultivator for the steering of the tractor turns the cultivator as desired. By placing the cultivator ahead of the tractor, the operator has a clear view of his work. He has nothing to watch but the cultivator and that is straight ahead.

The tractor steering wheel gives him perfect control with a minimum of effort.



Two views of the new Cletrac Model F

Dealers Enter Insurance Business

GEORGIA PLAN SAVES MEMBERS 35 to 60%

Will Cover Liability and Property Damage—How Plan Was Launched

ATLANTA, GA., Aug. 22—The Georgia Automotive Dealers Association, which recently became an incorporation under the laws of Georgia, has gone into the insurance business on a broad scale, adopting a group plan covering liability and property damage which saves every member of the organization in Georgia from 35 to 60 per cent, as compared with the previous rates they have been paying for such insurance, and more clearly manifests the real advantage of organization than any undertaking of the Georgia association since that body was formed a few years ago. The initial plan includes only the two forms of insurance, as stated above, but later insurance will also be provided against fire and theft at rate savings to the dealers equally as large.

Eliminates Profit

The idea of entering the insurance field on this basis as a tangible means of saving its members thousands of dollars through the elimination of the profit and further lessening of the rates by the group plan was considered for several months by committees representing the association before the present plan was adopted. A thorough investigation was made, pro and con, and the details of the plan submitted in writing to the Insurance Commissioner of Georgia, who has placed his stamp of approval upon it. The insurance is to be handled by the American Indemnity Co. through its agency in Atlanta.

The details of the plan adopted are comparatively simple, nothing more being required than that the insured be a member of the Georgia Automotive Dealers Association in good standing. Each dealer will receive his own individual policy, which differs in no respect from any other insurance policy, save that through the combined payroll of the members the premium is very materially reduced. This, of course, is the primary advantage of the plan.

Form Group Payroll

Contingent on securing a group payroll in excess of \$400,000, the American Indemnity Co. agrees to indemnify all members of the Georgia association, subject to the standard policy provisions for all companies, at the exceptionally low rate of \$1.20 per \$100 of payroll. This is a saving in premiums of from 35 to 60 per cent on the present costs of lia-

END OF BUSINESS DEPRESSION FORESEEN BY BANK IN NORTHWEST

MINNEAPOLIS, Aug. 19.—Economists have agreed that inasmuch as the Northwest was the first section of the country to begin liquidation, its recovery will mean the beginning of the end of depression in the United States. Conditions in this section undoubtedly are improving. In this connection the Northwestern National Bank, the largest in the Northwest, says in its monthly review of conditions:

"There has been a large carry over of obligations, and many of our trade difficulties caused by uneven readjustment processes have not been overcome; but in spite of disadvantages to surmount, the Northwest is definitely on the way to a recovery of its deferred prosperity. Bankers comment quite generally that the turn in affairs has come, although it will be far from a stamped toward affluence. Most of them believe that the present prices of grain and live stock, coupled with high freight costs, will make impossible a rapid or complete liquidation this season. Freight rates are the main factor out of the general alignment, to judge from the general comment."

bility and property damage insurance, which are the only forms covered in the initial plan. The policy offers the same protection as any other company offers for the same form of insurance.

There is no doubting but that the Georgia association will provide the group payroll of \$400,000 as required, for at a recent meeting of the State body a total of \$346,000 was applied for by those attending the meeting. Since then virtually all of the remainder has been applied for and the group insurance plan is scheduled to become effective at once.

P. A. Megahee, secretary of the association, has sent a questionnaire to every member of the body in the State covering the important phases of the matter, and replies received indicate that virtually every member of the organization will ultimately carry this insurance and no other form. The result will be a saving of many thousands of dollars to the automotive dealers of Georgia, amounting in each individual instance to many times more than the cost of association membership, and tangible proof of the genuine value of organization.

PIERCE-ARROW ADDS NEW ENCLOSED CARS

Four New Models Will Have Different Form of Roof Construction

BUFFALO, N. Y., Aug. 22—The Pierce-Arrow Motor Car Co. has introduced four new enclosed drive bodies for the Standard Pierce-Arrow Dual Valve Chassis.

These are in addition to the standard open and closed types of cars already listed. The new ones include a coupé; four passenger, four-door sedan; seven passenger sedan, and a seven passenger vestibule sedan.

Several new constructional features are used in these models, among which are a new form of roof construction which does not differ any in appearance from the previous roof construction but eliminates drumming. The roof, instead of being a sound board to intensify noises, deadens all sounds.

Special attention has been given to ventilation and the Duplex windows in the rear quarters lower close to the sill, the door windows open fully and the windshield is adjustable. A cowl ventilator forces air along the floor boards, while a new roof ventilator, cleverly concealed by the dome light, draws air from the interior.

NEW LONG MOTOR CAR IS VIEWED IN BOSTON

BOSTON, Aug. 22—The Bay State motor car has made its first appearance on the streets of Boston. A number of friends of Richard H. Long, the Framingham shoe manufacturer, were invited to inspect and ride in it from the courthouse. It is a sedan and Long proposes to sell it for \$2,500. He is going to cater first to the New England trade, and later increase production and sell elsewhere. His plans now call for delivering the car free at any point in New England, driving it over the road to the customers.

The new car has a six cylinder Red Seal Continental motor 3 1/4 x 4 1/2 with Delco ignition and a wheelbase of 121 inches. The body was built in Long's factory at Framingham. He is just finishing another plant at Worcester 600 feet long by 75 feet wide of six stories, the first unit of several such structures where he proposes to turn out a number of cars. For the present the cars will be sedans and touring models. Later on other models will be added to the line. He has equipment for making his own parts in the near future. The first cars will be ready for delivery this fall. An engineer has been obtained.

Senate Passes the Highway Bill

ELIMINATE PROVISIO TO NAME COMMISSION

Measure Calls for \$75,000,000 Appropriation—Victory for Automotive Industry

WASHINGTON, Aug. 19—Eliminating the provision calling for the establishment of a Federal Highway Commission, the Senate to-day passed the Townsend highway bill appropriating \$75,000,000 for the construction and maintenance of roads, one-third of which will be available immediately, and the balance to be distributed within six months. It was for the recognition of this highway commission plan that the automotive industry conducted a strong legislative campaign. The defeat was brought about by an unexpected eleventh hour change of front on the part of Senate leaders.

Senators from the eastern States, where the highway system is fairly well developed, were quick to oppose the appropriation of \$100,000,000, as proposed by the Senate Committee on Postoffice and Post Roads. Senator Lodge, of Massachusetts, Republican leader in the Senate, insisted that it was only fair to the tax payers of the country that economies should be made in road expenditures as well as in other forms of governmental enterprise. He declared that it would be at variance with the Administration's program of economy if such large appropriations were sanctioned. An effort was made to cut the appropriation in half, but subsequently it was agreed to appropriate \$75,000,000.

Townsend Surprised

The movement to abolish the highway commission, as prepared in the Townsend bill, was a distinct surprise to Senator Townsend and southern Senators who had heretofore opposed any change in the distribution of Federal funds, but later agreed to a compromise bill. Representative leaders declared that their action was based upon the fact that a report will be received shortly, from the reorganization committee now planning the redistribution and reorganization of Government departments. It is believed that the control of highways which is now vested in the Bureau of Public Roads, Department of Agriculture, will be transferred to a separate highway bureau in the proposed department of Public Roads, or to the Department of Commerce, because of the gradual recognition of the fact that highway transport and transportation affects business more than agricultural interests. For a time, it appeared that the so-called agricultural "bloc" in the Senate had taken control of the highway bill but developments showed that it was the drive of

the Administrative leaders for economic limitation of commissions that changed the committee's bill.

The bill as reported from the committee would probably have passed with the commission plan intact if a delay had not been occasioned by the inquiry of Senator Pomerene as to the terms of the measure and his objection to a vote, until delays could be given him. The Senate leader decided to rule adversely on the commission plan during the interim.

As a result of the debate on Tuesday, it was decided that 60 per cent of all Federal funds should be expended on three-sevenths of the total mileage of any State and the remaining 40 per cent to be expended on the next four per cent of State roads, thus assuring interstate roads. This agreement is regarded as a forward step by the industry agents. The bill when passed by the Senate, will go to conference but will not become a law for several weeks as a result of the congressional recess.

Distinctive Features

The distinctive features of the Townsend bill as it passed the Senate are: Recognition of the Interstate highway principle; drastic provision for maintenance; formula for the highway in the public lands States, also liberal appropriation for roads and forest reservations—\$5,000,000 for the first year and \$10,000,000 the second; and more rigid standards of durability, the latter being one of the principles which the National Automobile Chamber of Commerce and the American Automobile Association have advocated over a period of years. The new act provides that roads must be constructed with regard to the future as well as prevailing needs.

Pyke Johnson, secretary of the Highway Committee of the N. A. C. C., stated to-day that a number of circumstances contributed to the defeat of the Federal Highway Commission, as proposed by the industry.

He said that there has been a distinct feeling against the creation of new commissions and efforts of Senate leaders to enact legislation for this purpose have invariably failed of late. He cited the instance of the Norris bill. "There was no objection to the Federal Highway Commission as such," said Johnson, "but certain Senators thought it best to postpone the creating of such a commission until a report could be received from the reorganization committee, which is now working on a new plan for the Government departments and bureaus. The plea of economy which the Administration makes is also an important factor in defeating the commission idea. However, we regard the highway bill as a step forward and are confident that the principle will be given formal recognition at an early date."

SLIGHT CHANGE MADE IN GRAHAM MEASURE

Motor Trucks Shipped or Bought Before Aug. 15 Will Be Exempt from Duty

WASHINGTON, Aug. 20—Members of Senate Finance Committee decided to amend the Graham resolution to exempt merchandise, including motor trucks and other army surplus, bought or shipped prior to Aug. 15, after which the 90 per cent duty will become applicable. This change was brought about by insistent pleas of small bankers who had financed speculators, and American speculators themselves.

The resolution will be reported to the Senate this week before the recess as the measure was designed as an interim legislation. The House tariff bill, now under consideration by the Senate Finance Committee, contains a specific provision prohibiting the reimportation of war surplus materials without payment of duties which would protect American dealers from unfair competition. The fight for this protection was initiated by Los Angeles dealers when foreign and American speculators were selling rebuilt trucks at prices far below production costs.

The New York agents for French and English speculators told the Senate committee that assessment of duties over a period of months was not logical and it would be unfair to levy the duty on consignments already en route. The committee later fixed Aug. 15 as the date on which these customs would become effective.

Briggs Output Brisk

DETROIT, Aug. 22—Business at the Briggs Mfg. Co., manufacturer of enclosed bodies, is running fully up to the height of business a year ago and practically at capacity. The office force at the factory has been doubled, and almost as many men are at work in the factory as there were in 1920. A particularly heavy demand is reported in eastern territory for its new taxicab body designed for use on a Ford chassis.

Columbus Sales Improve

COLUMBUS, O., Aug. 22—Continued improvement in the passenger car business is reported by practically all of the dealers and distributors in Columbus and central Ohio. Some recent reductions in prices have still further stimulated sales, and it is believed that the worst of the slump is over and that there will be a continuous improvement from this time on.

SHERMAN ANNOUNCES A. E. A. SELLING PLANS

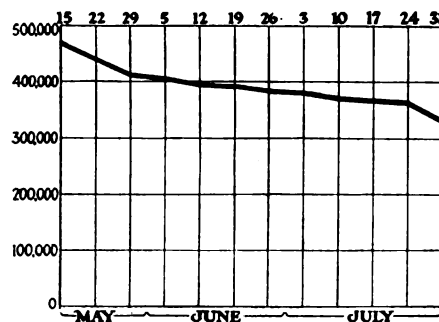
Chicago Manufacturers Approve of Methods, Giving Assurances for Support

CHICAGO, Aug. 22—Details of the merchandising plan of the Automotive Equipment Association, which was authorized at the Mackinac Island convention were made public for the first time last evening at a meeting of the Association of Automotive Equipment Manufacturers by Ray W. Sherman, who recently left the Class Journal Co. to become merchandising director of the A. E. A. The organization which heard the story last evening is made up of equipment manufacturers in the Chicago district, most of whom belong to the A. E. A. The manufacturers expressed their approval of the plan and gave assurance of their support of the work.

As a first step in the campaign the association plans to enlist the assistance of the jobbing salesmen, many of whom have already won the approval of dealers by efforts to show how business profits may be increased without much increase in operating cost by installing automotive equipment departments. That the merchandising plan may be presented to the largest number of dealers in the shortest time, a book on the subject is being prepared and will be ready for distribution this fall. The entire industry will lend its assistance to the distribution. Briefly described, the book will tell how to add to business profit by equipment sales and will tell how to sell.

Many meetings of the jobbing organizations and also of dealers are planned.

The automotive equipment week, Aug. 6-13, proved successful and other national campaigns for the furtherance of business are planned.



Idle Freight Car Record

The black line represents the record of idle freight cars throughout the United States. It is a business indicator of interest to all automotive men, and especially to the truck dealers. When the railroads are busy carrying merchandise it follows that manufacturers and merchants are busy fulfilling the orders of customers. Between May 15 and July 31 the average net car surplusage has shrunk from 469,770 to 328,723, a decrease of 141,047. In the week ending July 31 the shrinkage of surplus cars was 32,888. The chart above shows the gradual downward trend of freight car surplusage since May 15.

POST-WHITNEY EXPECTS BIG FALL TRACTOR SALE

CLEVELAND, Aug. 19—The Post-Whitney Co., a consolidation of the Post Tractor Co. of Cleveland, the Whitney Tractor Co. of Upper Sandusky and the Chief Motor Co. of Port Huron, has made plans for the sale and distribution of a large number of tractors in the next 16 months. Efforts will be concentrated on the Whitney tractor, which is a one-man, two-plow, four-wheel tractor with an S. A. E. rating of 9-18. By centering energies on the production of a single model the company will be able to reduce the price materially. The model sells at present for \$1,175, but a new price will be announced soon.

HUDSON-ESSEX CUTS PRICES THIRD TIME

Reductions Effective Immediately—Hudson Coupe Drops from \$3125 to \$2770

DETROIT, Aug. 22—The third reduction in price since the readjustment process began is announced by the Hudson Motor Car Co. The prices, which are effective immediately, follow:

Hudson:	New Price	Old Price
Touring car.....	\$1895	\$2250
Coupe.....	2770	3125
Sedan.....	2895	3250
Essex:		
Touring and roadster..	1375	1415
Coupe.....	1880	1950
Sedan.....	2230	2300

Prices of the other Hudson models are: Cabriolet, \$2,495; touring limousine, \$3,120, and limousine, \$3,495.

General Motors Cuts Trucks

PONTIAC, MICH., Aug. 22—General Motors Truck Co. announces price reductions, effective Aug. 17, on all its models. The largest cut is on the 1-ton. The prices follow:

	New Price	Old Price
Model K 16 1 ton.....	\$1495	\$1995
Model K 41 2 ton.....	3000	3250
Model K 71 3½ ton.....	4250	4500
Model K 101 5 ton.....	4650	5100

Koehler Trucks Cut

BLOOMFIELD, N. J., Aug. 22—Price reductions averaging about \$500 on its trucks and tractors have been announced by the H. J. Koehler Motors Corp. The prices follow:

	New Price	Old Price
Model D 1½ ton.....	\$1885	\$2285
Model M 2½ ton.....	2875	3365
Model MCS 2½ ton.....	2975	3450
Model F 3½ ton.....	3985	4450
Model MT 5 ton, road tractor.....	2975	3450

King Models Cut

DETROIT, Aug. 22—The King Motor Car Co. has made substantial reductions in its prices. The list follows:

	New Price	Old Price
4 and 6 passenger touring	\$2225	\$2725
Roadster.....	2140	2740
Coupe.....	3125	3625
Sedan.....	3235	4035

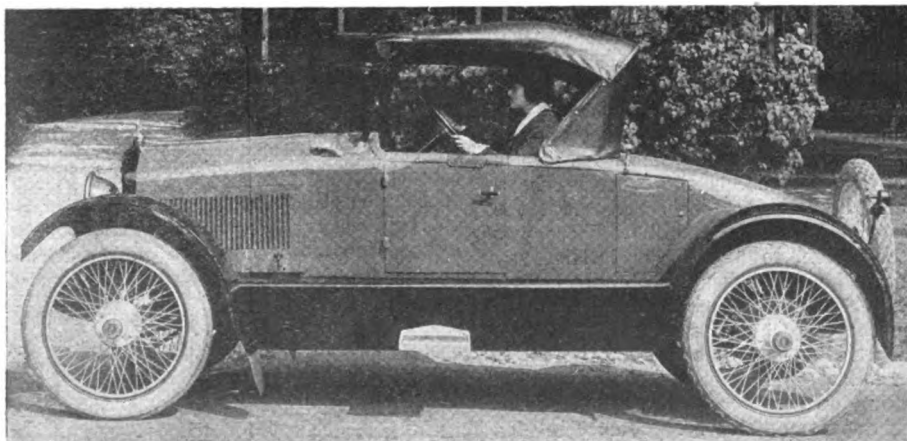
Piedmont Cars Cut

LYNCHBURG, VA., Aug. 22—The Piedmont Motor Car Co. has decided to reduce the price of its 4-30 model from \$1,270 to \$970 and of its 6-40 model from \$1,495 to \$1,285.

Mutual Receiver Asked

INDIANAPOLIS, Aug. 22—A petition has been filed at Sullivan, Ind., for the appointment of a receiver for the Mutual Truck Co. with a plant in that city. The petitioners are the Electric Steel Co. of Indianapolis and Sherman & Pomroy, Inc., advertising agents in Chicago. It is alleged that the company is insolvent and that it owes \$85,000.

Elgin Has a New Roadster, \$1,595



A new roadster, built on the Elgin K-1 chassis has made its appearance. The model is chiefly distinguished through the special treatment of the body details. The running boards are supplanted by steps which are attached to the frame beneath the doors and the fenders are of novel design. The wire wheels are white and fitted with 33 x 4 cord tires as standard equipment. There are a number of minor changes in the body arrangement to fit in with the general idea

LIABILITY RATES UP BEFORE CONFERENCE

Workmen's Compensation Bureau Will Discuss General Revision at Coming Meeting

NEW YORK, Aug. 22—General revision of automobile liability rates will be discussed at a conference to be held in the near future by members of the National Workmen's Compensation Service Bureau. The call for the meeting states that there are indications that coverages and rates are not properly adapted to present conditions. In this connection A. W. Whitney, general manager of the bureau, says:

"It has been evident for some time to the automobile committee and to us in the bureau that this season should see a thorough overhauling of our automobiling rating system. There are many indications that our coverage and rates are not properly adapted to the present conditions in the automobile field. We are working on the problem in this office and have, for one thing, participated in a recent joint conference in Detroit between the bureau, the Fire Underwriters' Conference and a committee from the National Automobile Chamber of Commerce. This meeting, which was for the purpose of discussing fundamental matters of common interest, was of considerable importance in itself and also because it paved the way for a relationship in the future which may do much to bring our practices into closer relationship with the needs of the business.

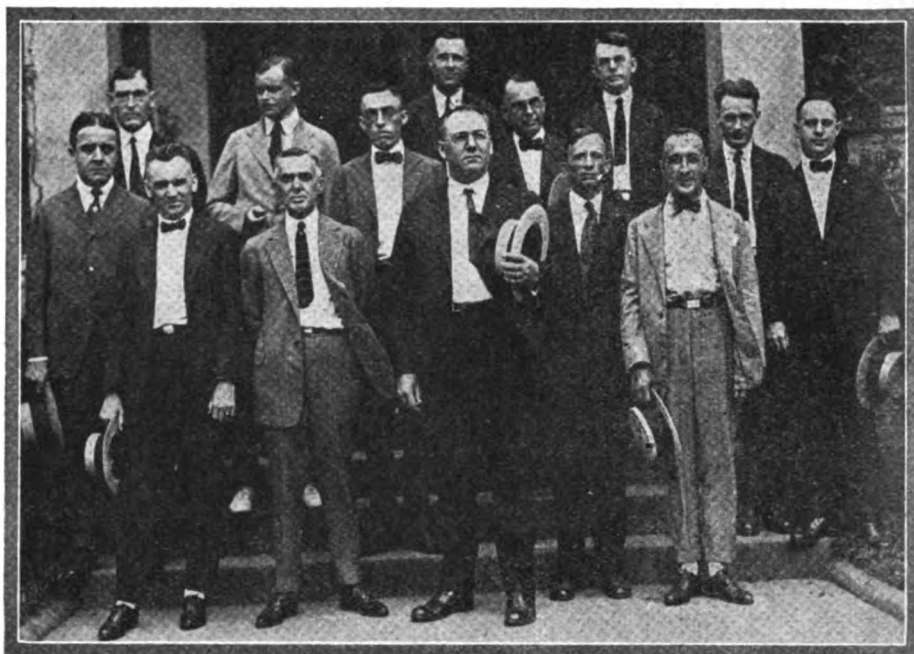
"We propose to start the work of the automobile committee about the middle of September with an intensive consideration of the general problem."

The call for this conference and the statement by Whitney would indicate that the insurance companies are beginning to take seriously the threat made by automobile interests through the National Automobile Chamber of Commerce that unless radical changes are made in the present automobile insurance system mutual companies would be formed for the protection of manufacturers, dealers and car owners.

Reports from various sections of the country show that insurance companies are beginning to take into account the "moral hazard" which has been disregarded in the past.

Motor Cars Part of Fair

PHILADELPHIA, Aug. 22—Automobiles will play a more important part than ever at the tenth annual county fair of the Philadelphia Fair Association at Byberry, Sept. 5-10, inclusive. They will not only be seen at the automobile and truck show, but on "getaway day" three races will be held. Many types of tractors will be exhibited, from the Fordson to the bigger models. Practical demonstrations will be made on the fair grounds by tractor company representatives.



Executives of Buick Atlanta Branch

Here's how they lined up for the photographer on the first day of the recent convention. First row, standing, left to right—L. J. McDonnell, manager parts department; Benj. F. Ulmer, assistant manager, Atlanta branch; Byron H. King, manager, Atlanta branch; T. S. Lewis, advertising manager; R. W. Ottman, shop superintendent. Middle row, left to right—W. J. Keller, assistant sales; N. F. Baxter, traveling representative; E. Gilbert Osborne, traveling representative; W. H. Langmaid, manager, service department; L. B. Nichols, traveling representative. Back row—L. C. Goering, Jr., traveling representative; J. R. Dunn, traveling representative; N. G. Brown, traveling representative; A. Wickham, cashier.

JULY SHIPMENTS OF CARS AND TRUCKS 61 PER CENT OF SAME MONTH IN 1920, SAYS REPORT OF N. A. C. C.

NEW YORK, Aug. 22—Reports made to the National Automobile Chamber of Commerce show that July shipments of cars and trucks by its members were 61 per cent of July, 1920, and 7 per cent less than for June of this year. Last year July shipments were 4 per cent less than in June. Shipment figures by months thus far this year are:

	Cars and Trucks		Driveaways		Boat	
	1920	1921	1920	1921	1920	1921
January	25,057	6,485	29,283	3,185	....	93
February	25,505	9,986	43,719	7,507	....	99
March	29,326	16,287	57,273	9,939	....	75
April	17,117	10,187	64,634	14,197	....	1,619
May	21,977	18,608	74,286	15,193	....	2,381
June	22,516	20,269	60,746	18,834	3,350	3,947
July	23,082	19,476	52,342	15,320	8,702	3,725

Mercer Ratifies Plan

NEW YORK, Aug. 21—Stockholders of the Mercer Motors Co. have ratified plans for the reorganization of the company as they were outlined two weeks ago. Theodore E. A. Barthel was elected vice-president and treasurer and George L. Catlin, assistant treasurer and secretary. W. A. Smith will be general sales manager. Reorganization of the company will be put into effect as soon as working capital becomes available through the new financing. The stock and bond issues proposed have been largely subscribed already and it is not expected there will be any further hitch. Under the reorganization Mercer will be divorced entirely from Hares Motors and will be operated as a separate entity from now on.

Cameron Acquires Plant

NEW YORK, Aug. 22—Cameron Motors Corp. has taken over from Cass T. Wright the plant of the Greenville Implement Co. at Greenville, Mich., which will be used for the manufacture of castings for its motors and tractors. Cameron Motors recently acquired the plant at Sandusky, Ohio, of the Dauch Mfg. Co., making the Sandusky tractor.

Hearn Wins Cotati Race

SANTA ROSA, CAL., Aug. 22—Eddie Hearn driving a Duesenberg-Distil car won the 150-mile automobile race which opened the Cotati Speedway here. His time was 1 hour, 21 minutes, 19.5 seconds. Roscoe Sarles in a Duesenberg was second and Tommy Milton in a Durant Special was third.

RECEIVER TO REMAIN AT STANDARD PARTS

*Stockholders Victorious When
Request to Sell Assets Is
Denied by Court*

CLEVELAND, Aug. 22—Stockholders of the Standard Parts Co., which has been in the hands of receivers nearly a year, won a victory when Federal Judge D. C. Westenhaver ordered that the receivership be continued. Creditors of the company had petitioned the court for an order to sell the corporation's assets at once.

Under the creditors' plan they would buy in the plants, form a new company to operate them, and the stockholders of the present corporation would be given the privilege of subscribing for a limited amount of stock in the new concern. The creditors would retain control of the new corporation.

The court also allowed the request of the receiver, Frank Scott, for permission to pay a 10 per cent dividend to creditors. Approximately \$1,000,000 will be paid out under this order. The company will have \$500,000 in the treasury after the dividend is paid.

Judge Westenhaver declared that the actual physical value of the Standard Parts Co. is between \$17,000,000 and \$19,000,000 as compared to the \$12,000,000 to \$13,000,000 value fixed by the creditors. Commenting on the earnings of the company, the court expressed the opinion that operating losses during the entire receivership have been less than \$60,000.

He said he believed the plant was being operated economically and that to turn the properties over to the creditors would be inequitable. The court further said that probably none of the plants could be sold at this time, and that if opportunities developed in the meantime, the properties could be disposed of as efficiently through the receiver as under the creditors' control.

The company, under the receivership, has made money in recent months. August business is holding up better than the average August in the past, and the management expects even better business during the fall months.

PLAN DISTRIBUTION OF HAYES WHEEL PRODUCTS

DETROIT, Aug. 22—National distribution of Hayes Wheel Co. products was discussed at a meeting of executives and distributors held at the Jackson factory. In connection with the meeting an exhibit of wheels and component parts was shown, the new demountable-at-rim wheel being featured. The company plans to build its business in the United States and abroad around this type of wheel.

Addresses by dealers and officials showed complete confidence in the future of the automobile business in general and the wheel part of it in particular.

Among those who spoke were W. D. Blood, head of W. D. Blood Co., New York, export agents for Hayes products; President C. B. Hayes, G. S. Porter, Sargent Ziegenbien, C. F. Field and Brundage.

CREDITORS ARRANGE TO RUN SUPREME MOTORS

WARREN, OHIO, Aug. 22—Creditors of the Supreme Motors Corp. have decided that the affairs of the company can best be conducted by the appointment of an advisory committee of creditors to act with the officers of the company. F. B. Whitlock, vice-president of the Interstate Foundry Co. of Cleveland, has been appointed chairman of this committee. An agreement has been formulated contingent on the stockholders raising at least \$125,000 to be disbursed under the direction of the advisory committee. Payment of all claims would be extended to Oct. 1, 1922, with acceptance by the creditors of 7 per cent notes for the amount due them.

WARNER SELLING STOCK FOR DURANT MOTORS

DETROIT, Aug. 22—Fred W. Warner, former president and general manager of the Oakland Motor Car division of the General Motors Corp., has been placed in charge of the selling of stock for the Durant Motors Corp. of Michigan. Warner was the first of the General Motors executives to retire after the formation of Durant Motors, but he remained a director of the corporation, although it had been understood he intended to join Durant. He went with the Oakland company in 1914 as general sales manager from Chicago, where he had been manager of the Buick plant since 1911.

Warner is a native of Chicago. He began his business career with a retail hardware store in McPherson, Kan., where he remained until 1890, when he went with the John Deere Plow Co., Kansas City, as a salesman. When he left in 1904 he was sales manager. His next business venture was with a wholesale implement and vehicle house in Dallas, Tex., where he remained until he went with the Buick company.

STUDEBAKER NET INCOME SHOWS LARGE INCREASE

SOUTH BEND, IND., Aug. 9—The Studebaker Corp. for the three months ended June 30 reports net income, after all charges and factory reserves for inventory adjustment, of \$4,270,547. After payment of preferred dividends this was equivalent to \$6.83 a share on the outstanding common. In the first three months of the year the company reported net profits of \$2,210,577.

Net sales for the second quarter of 1921 were \$33,059,834, as compared with \$22,249,299 for the same period in 1920. Total assets are \$96,880,381, including trade name and good will, which are valued at \$19,807,277.

\$12,533,909 PROFIT FOR GENERAL MOTORS

*Figures for Second Quarter
Show Big Gain—du Pont
Explains Progress*

NEW YORK, Aug. 21—Net profits of the General Motors Corp. for the second quarter of 1921 were \$12,533,909 as compared with \$1,675,492 for the first quarter, indicating the remarkable increase in business which followed the first three months. Total profits for the first half were \$14,209,402, but this amount is cut to \$9,659,531 by a reduction of \$4,549,870 to take care of refunds given purchasers of automobiles under guarantees against price declines. The amount reserved for this refund shows the effect on sales of lower prices.

The statement of earnings and a consolidated balance sheet, filed with the New York Stock Exchange, was accompanied by a letter from Pierre S. du Pont, president of the corporation, in which he told of the progress made in reduction of inventories and current liabilities.

Inventories which amounted to \$222,098,805 in October have been reduced to \$147,502,086. Of this reduction, however, \$25,776,112 was accomplished by the writing down of inventories.

During the same period of depression accounts payable, which had reached \$40,736,127, have been reduced to \$19,852,581, and notes payable from \$87,596,076 to \$68,808,250.

The consolidated balance sheet shows current and working assets of \$234,179,805, including \$49,363,653 in cash, \$5,547,867 in sight drafts against bills of lading, \$9,133,387 in notes receivable, \$21,042,606 in accounts receivable and trade acceptances and \$147,502,086 in inventories.

Current liabilities amount to \$110,060,804, including \$19,852,581 in accounts payable and trade acceptances, \$68,808,250 in notes payable and \$20,381,334 in taxes, payrolls and sundries accrued but not due.

300 THORNTON-FULLER WORKERS HOLD PICNIC

PHILADELPHIA, Aug. 21—Three hundred employees of the Thornton-Fuller Automobile Co., with their guests, held their annual picnic at Neshaminy Falls. They met at the showroom of the company and were conveyed in a fleet of Dodge cars to the picnic grounds, where they were served with a luncheon provided by the company.

The athletic feature was an Industrial League baseball game, between the Thornton-Fuller team and Supples-Biddle Hardware Co. nine. The picnickers were entertained by the Thornton-Fuller orchestra and there was dancing in the pavilion. Various forms of sports, bathing and canoeing followed.

It was a day long looked forward to and thoroughly enjoyed. It added to the good fellowship of the workers also.

L. R. GERMAN BECOMES MANAGER FOR DURANT

*Leaves Olds to Go With Ver
Linden in Sales Capacity
—Starts Sept. 1*

NEW YORK, Aug. 22—Leon R. German, former comptroller and vice-president of the Olds Motors division of the General Motors Corp., has been appointed sales manager for Durant Motors Corp. of Michigan, which is headed by Edward Ver Linden, former president and general manager of Olds. He will have charge of Durant sales in the territory between the Adirondacks and the Rocky Mountains and will assume his duties Sept. 1.

German has been closely associated with Ver Linden since 1913, when the latter became works manager for Olds. When Ver Linden was appointed general manager in 1916, German was given a more responsible position and finally was elected vice-president. He has been in charge of operations at the Olds plant since the retirement of Ver Linden. Announcement that he would join his former chief was made in Motor World several weeks ago.

Incorporation papers for Durant Motors Corp. of Michigan have been filed at Lansing. The capitalization is \$5,000,000 in common stock with a par value of \$10. W. C. Durant, vice-president, holds 130,000 shares. The other incorporators are: Edward Ver Linden, president and general manager; Edmund C. Shields of Lansing, secretary and treasurer; Carroll Downes and C. F. Daly of New York, all of whom hold 100 shares. Downes is connected with the Durant corporation and formerly held a responsible position in a Philadelphia bank.

Work on the new plant at Lansing has progressed so rapidly that it is expected production of cars will begin by November. The Durant Four will be assembled in the meantime at the Long Island City plant.

Announcement is made at Durant headquarters that a complete line of six-cylinder automobiles, including five-passenger and seven-passenger touring cars, runabouts, coupes, sedans and limousines, will be made by the Durant Motor Co. of Indiana, which has taken over the Sheridan plant of the General Motors Corp. The directors of the Indiana company are Durant, T. W. Warner and D. A. Burke.

COAST DEMONSTRATION FOR TRACTORS CLOSES

PORTLAND, ORE., Aug. 22—One of the largest tractor demonstrations ever held in this country by one organization came to a close last week, after two weeks of successful display, under the auspices of the Fordson dealers throughout Oregon and the nine southern counties of Washington.

The demonstration occurred on a farm about 10 miles east of Portland. Twenty Fordson tractors were in use constantly and every imaginable kind of farm machinery to which one of the tractors could be hitched was demonstrated. Automobiles were plying constantly between Portland and the demonstration point, and throughout the two weeks thousands of people from Portland and from other points throughout Oregon and southern Washington were in attendance.

At the demonstration farm it was arranged to give demonstrations of threshing grain, baling straw, breaking land, plowing, harrowing and seeding. A piece of timber land, adjoining, was cleared by means of a Fordson outfit and the land broken into shape for farming. Demonstrations of road-building were also made, and all kinds of stationary work were performed by the Fordsons, including such as grinding feed and filling silos.

Over 60 Fordson dealers throughout this territory aided in the demonstration, and most of these were on hand throughout the two weeks to aid in making the big event successful. The demonstration was under the immediate charge of the combined Fordson dealers of Portland.

PAIGE SELLS ENCLOSED OUTPUT FOR AUGUST

DETROIT, Aug. 22—Paige Motor Car Co. sold out its entire August production of enclosed cars in the first five days of the month. The demand is reported at the factory to be far in excess of former seasonal demand for enclosed types, and production will be increased to meet sales requirements.

In response to a factory request for estimate on enclosed car sales requirements in September and October, two leading distributors placed orders for 140 and 125 cars for their respective territories. These were the high spots in the estimates submitted, but practically all distributors filed orders running ahead of former seasons.

HOUSE FAILS TO PASS DYER THEFT MEASURE

WASHINGTON, Aug. 21—Though the Senate passed the bill known as S 2272 to amend the National Motor Vehicle Theft Act, imposing a fine of \$5,000 or five years' imprisonment, the House failed to approve the so-called Dyer bill, which proposes to amend the act by putting in the word "embezzlement" to prohibit interstate transportation of stolen vehicles. Congressman Garrett, Democrat, of Tennessee, has been the chief opponent of the measure and his objection defeated it in the House. Congressman Dyer, the author of the House bill, stated that automobile manufacturers, dealers and users were in favor of the legislation, as it would fortify and make the automobile theft act stronger.

VER LINDEN REPLIES TO GENERAL MOTORS

*Answers Suit by Claiming
\$709,037—Case Likely to
Be Delayed*

DETROIT, Aug. 22—The answer of Edward Ver Linden to the suit for recovery of \$490,000 brought by General Motors Corp., as filed in the United States District Court here, consists of a complete rebuttal of the allegations of the corporation and announces that he will claim the sum of \$709,037.33 by way of recoupment. The case will be moved for trial when court convenes, but is likely to be long delayed owing to the heavy calendar of cases preceding it.

In setting forth his claims, Ver Linden amplifies the statement made by his counsel, Thomas, Shields & Silsbee, following the first filing of the suit by General Motors. The terms of his contract made under the Durant régime on Aug. 1, 1918, are set forth in the answer, showing that he was to receive \$100,000 a year salary and a percentage on earnings in excess of \$2,000,000.

Outstanding features in the contract quoted are:

On earnings up to \$5,000,000 the general manager to receive 5 per cent.

Earnings from \$5,000,000 to \$10,000,000 the general manager to receive 3 per cent.

Earnings \$10,000,000 to \$20,000,000 the general manager to receive 1 per cent.

In case corporation's earnings exceed or fall short of 30 per cent on the total capital invested, exclusive of good will, 2 per cent is to be added or deducted for each 1 per cent of excess or deficiency.

One-third of the percentage earned at the end of the first year to be paid one-third in corporation's bonus stock, and in succeeding years two-thirds to be paid in bonus stock.

The aim of this form of compensation is to effect a large and continuing investment in General Motors stock by general managers.

LEACH BILTWEEL BRINGS OUT NEW MODEL "SIX"

LOS ANGELES, CAL., Aug. 22—The Leach Biltwell Motor Car Co. has just brought out a new model of the Power-Plus Six, the first cars being displayed at the first Industrial Trade Exposition. While some of the mechanical details remain as before, the engine is entirely new, being made in the company's own plant. It has overhead valves and is said to develop over 100 h.p. on the brake. The cylinder dimensions are 3 $\frac{1}{4}$ x 5 $\frac{1}{4}$ in. The wheelbase has been lengthened to 134 in. Prices on all models have been set at \$6,500. Standard units include Delco ignition, Timken axles, Disteel wheels and Prest-O-Lite battery. The gearset is made by the company.

CO-OPERATION PLAN AIDS TEXAS DEALERS

If One Fails to Sell Prospect Is Advised to Inspect Some Other Make

DALLAS, TEX., Aug. 22—While the automobile and truck business in north Texas has not suffered the slumps felt in other sections of the country, due to the diversity of crops and industries which keep money in circulation, and the fact that the financial stringency has never been felt in this section, retailers are now beginning to inaugurate various schemes for the reduction of expenses and yet keep the revenues up to the standard, or increase them. This, the dealers say, is the beginning of getting back to normal proper—allowing for lower prices, smaller profits, better service and selling more goods.

One of the things the dealers generally have done is to eliminate the salesman who "sold a car occasionally" and putting on only the men who can "deliver the goods" all the time. They are making automobile salesmanship a profession rather than a side line, and they say sales are increasing from that one plan. Another thing is that when a salesman works up a sale and some office man closes it or delivers the car or truck, the salesman is given the credit.

Retailers Specializing

The majority of the retailers are specializing. That is, they are pushing one particular style of car, saying that the sale of this established product increases the sale of all other styles of the same make.

Again, the retailers, almost to a man, maintain a service station where the owners' interests are carefully looked after. Usually this is done for a certain length of time without charge to the owner.

The retailers are working in harmony. They say if they can't sell a man their car they will break the ground for some other dealer to sell one, and thus insure the customer or prospect a car of some kind. This is the first time there has been such co-operation among dealers in Dallas and north Texas.

Jobbers are assisting their out-of-town dealers by furnishing expert salesmen without charge for special cases. Also they are writing "pulling" advertisements for their dealers, and it is said in some instances are helping to pay the bills where those advertisements are run.

Truck dealers are finding everyone wants a truck. But they also find not everyone is able to pay for it. Like the automobile dealers, they cannot trade their "truck paper" to the factory for more trucks, and they must get paper that is negotiable at the bank. They do it in a peculiar manner and one which is satisfactory to everyone concerned.

When they find a man wants a truck and is really able to own it, but has not all the cash to pay for it right now,

they learn of conditions through influential and well-fixed neighbors. They ask these neighbors if they would be willing to go on the prospect's notes if he bought a truck. Nine times out of ten they are more than willing. With that arranged, they approach the prospect. They overcome his plea of lack of finances on the spot, close the deal, get the notes, deliver the car, collect on the notes at the bank and continue business, with everyone satisfied.

So far there has been no reduction in wages of employees at the various automobile houses, but they are likely to come later in the year or the first of the coming year.

REGISTRATIONS DROP IN SOUTHERN CALIFORNIA

LOS ANGELES, Aug. 22—July showed a loss over June of almost 1000 in the number of new car registrations in Southern California. The total for the month was 4290, while June reported 5223, according to figures that have just been made public. As an indication of conditions in the outlying territory, 3078 of the new cars registered were from Los Angeles County. There are 10 counties in what is known as Southern California. The number of trucks and commercial cars registered during the month was 405. The totals to Aug. 1 for the year are 24,788 passenger vehicles and 3251 commercial vehicles.

Southern California has been known all year as the best motor vehicle market in the country, and local dealers have been warned against a probable attempt to load this section to a point beyond which it can consume. Many carloads of cars and trucks have been shipped in here without there being any dealer representation for them.

EXPECT 1000 FORDS WILL GO TO MEXICO MONTHLY

DETROIT, Aug. 22—Ford Motor Co. shipments into Mexico are increasing at a rate which indicates that a business of 1000 cars a month will soon be realized by its Houston branch. All Mexican business is controlled by this branch, with the exception of the states of Sonora, Sinaloa and Tepic. There are 180 dealers under the branch, which includes, besides its Mexican territory, the entire southern half of Texas.

Samuel T. Colt Dies

PROVIDENCE, R. I., Aug. 22—Colonel Samuel T. Colt, chairman of the board of the United States Rubber Co., died at his home in Bristol after a severe stroke of paralysis which he suffered a week ago. He was born in Paterson, N. J., 1852. He was named after an uncle who invented the Colt revolver. His mother's family was one of the most prominent in Rhode Island in Colonial days.

Colonel Colt was graduated from the Massachusetts Institute of Technology at 21. He then entered Columbia law school and received a degree in 1876. He began practice in Rhode Island.

KANSAS CITY EXPECTS GOOD FALL BUSINESS

New Vigor Anticipated in In- dustry—Aggressive Pro- grams Planned for Sales

KANSAS CITY, Aug. 22—Two factors are operating to retard motor car and truck sales during August. One is the failure of the harvest returns to cover liquidation needs for farmers and merchants, and the other is the temporary depression into which retailers, and especially jobbers, have fallen, since reviewing the business of the first six months of this year.

The first factor is not as serious as it sounds, although it is generally admitted that the circulation of money has not reached the extent that had been anticipated for this month. Optimists had declared that the harvest returns would enable farmers to meet most of their back bills, and consequently merchants would be able to pay up their back bills, too. But this has not been the case. Many merchants will have to be carried over till winter on their 1920 overhanging indebtedness. They and the farmers are paying current bills promptly, but somehow the 1920 residue seems to stick in the unpaid files.

Wheat is not yielding the total revenue expected, but corn is turning out far better than expected, and other forage crops are in unusually good condition and volume. The total revenue of farmers there will be large for the year and eventually the volume of money will be adequate for normal present business and for the liquidation of the 1920 balance. There may be a few failures during the coming four months—but at last the readjustment is in sight.

The depression of merchants is due to their discovery that they have not made as much money this year as last. In some cases the discovery has been of a very small profit for the six months or for the fiscal year. It has been a strenuous period, with the necessity for extraordinary effort to secure a volume in money equal to last year, involving turnover of a great deal more merchandise. The merchants have been under a strain and they have relaxed, often into melancholy, but an unusual number of them are on vacations, from which they will return with new vigor.

(Continued on next page)

Charlotte's Hopes High

CHARLOTTE, N. C., Aug. 22—Automobile business next fall and spring in this section is expected to be practically double that of a year ago. It is not likely, however, that farmers who raise tobacco and cotton will be able to do much buying after they have liquidated their indebtedness. Indications are that country bankers will be very conservative in regard to handling automobile paper for the small town dealer. These bankers are loaded with notes given by farmers on the last year's crops.

COLUMBUS SALES ARE ON UPWARD TREND

Improvement in Unemployment Situation—Rural Districts Better

COLUMBUS, O., Aug. 22—A continued improvement in the demand for passenger cars is reported from practically all of the agencies and distributors of Columbus. The business is now definitely on the up grade and it is believed that the improvement will be continuous.

In most makes trade is stimulated by the recent price reductions and agencies generally are fairly busy. This applies to cars ranging in price from \$800 to \$3,500 and in some instances higher priced cars. But the usual run of business is now for the medium priced lines and these are showing the best improvement.

The unemployment situation in Columbus is better than several weeks ago. This is an encouraging factor and presages a continuation of the improved demand. It is believed that the worst of the slump is now over and dealers and distributors are making plans accordingly.

In the country districts trade is still slow although some slight improvement is reported. The crop prospects are slightly better with recent heavy rains and the farmers are showing some disposition to come into the market. But little trade is anticipated in the rural sections for some time as the farmers are not having a prosperous season in the Buckeye State.

Truck business is still slow with the exception of the demand for light delivery wagons. The heavy truck business is at a standstill and little hope of immediate revival is seen. Heavy haulers have a good supply of trucks and they are not coming into the market as a result.

Repair business at practically all of the service stations and repair shops in Columbus has been good. Some of the service stations are fairly well crowded with work while others have sufficient to run with a good force from week to week. There is also a good demand for parts.

CO-OPERATION PLAN AID FOR DEALERS IN TEXAS

(Continued from page 40)

It is certain that merchandising in this community will be unprecedentedly vigorous this fall. Many merchants are known to have left orders for the preparation of big programs for selling, and it is notable that these programs do not involve special sales of bargains so much as special means of attracting attention to merchandise.

Merchants are swarming into Kansas City to buy merchandise, and it is ob-

vious that about the same program of aggressive merchandising will be carried on throughout the territory in the fall. Motor car and truck dealers who adopt the "merchandising emphasis," who adorn their display windows, concoct original means of attracting attention, and get the spirit of pushing merchandise aggressively, on the assumption of a large purchasing power that minimizes price, will doubtless report later that trade has been wonderfully good this fall.

Texas Outlook Bright

HOUSTON, TEX., Aug. 22—While conditions in southern Texas still are bad, the outlook for general business for the next year is reasonably encouraging. Prospects are that it will be slow for the next six months, but that after that there will be a marked improvement which will carry it rapidly toward normal. Few of the farmers in this section will have funds to purchase automobiles or tractors when they have finished paying off their indebtedness this fall, but with the harvesting of another crop they will be back in the market for automotive equipment.

Northern California Happy

SACRAMENTO, CAL., Aug. 22—Harvest conditions that have more than fulfilled expectations, together with a lessening in the financial stringency, have served to stimulate automobile sales in northern California. The autumn business is proving better even than that of last spring, due to the facts just mentioned, and also to the belief that no more price reductions may be expected soon.

The reduction of two cents in the price of gasoline, also, has not been without its good effect. Wavering prospects are of the opinion that upkeep costs will continue to decrease, and orders are coming along in good shape, with just enough competition to keep a healthy tone in the business.

The touring season has been the very best the State has known. All of the hundreds of parks and beauty spots have been crowded during the summer months and the approach of fall and the opening of schools so far has brought no appreciable decrease.

Southwest Going Ahead

DALLAS, TEX., Aug. 22—The automotive business in north Texas, Oklahoma, parts of Louisiana, New Mexico and Arizona, supplied by Dallas dealers and jobbers, continued to show some improvement during the first half of August. Many of the retailers in Dallas and other parts of the trade territory reported their business back to normal and even surpassing the banner days of two years ago. Others said the business was as well as could be expected.

The selling of cars themselves has been augmented by the presence of some \$100,000,000 from the grain and fruit crops. This money is now in general circulation and buying is brisk.

APPOINTS RECEIVER FOR SIGNAL TRUCK

Court Issues Decree of Disso- lution for Maine Corpora- tion—Plant at Detroit

PORTLAND, ME., Aug. 21—Federal Judge Hale has appointed Philip G. Clifford of this city receiver for the Signal Motor Truck Co., a Maine corporation, with its plant at Detroit. Judge Hale also issued a decree for the dissolution of the corporation. The action was taken on complaint of Milton B. Hoagland, vice-president and general manager of the company. He began proceedings in accordance with a vote of the stockholders. While business depression resulted in the closing of the plant, it is asserted that the assets exceeded the liabilities.

The company was incorporated in 1916 with a capital stock of \$600,000 in common and \$200,000 preferred. There is outstanding \$348,000 in common and all the preferred. All the common stock was deposited in a five-year voting trust expiring this year. The voting trustees are Hoagland, C. P. King and A. C. Burch. The company has a funded debt of \$190,000 in 7 per cent bonds and \$220,000 in 7 per cent gold notes. J. G. Heaslet is president and H. H. Emmons is secretary.

The company has manufactured five models of trucks, ranging in capacity from 1 ton to 5 tons. The capacity of the Detroit plant is 1500 trucks a year.

WHEEL PLANTS OPERATE ON SIX-DAY WEEK BASIS

DETROIT, Aug. 22—Prudden Automobile Wheel, Gier Pressed Steel and Motor Wheel plants of the Motor Wheel Corp. are now operating on a full six-day week. Motor Wheel plant has increased the number of men on its payrolls from 600 to 1075; Prudden is now employing 750 and Gier, from almost complete cessation 60 days ago, is now employing 175.

Die and tool making divisions at the Gier plant have been working overtime preparing to go into production on new contracts signed during the dull season.

Cadillac Increases Force

DETROIT, Aug. 22—Cadillac Motor Car Co. is increasing its working force to meet increased demand for its product from larger cities of the country. About 1000 men will be added, factory officials declare, bringing production up to 65 cars a day, or 75 per cent of normal output. New business is reported to be running about even as regards inclosed or open models, with the inclosed car a slight favorite. Though the principal source of the new business is from leading industrial centers, the company declares improvement is becoming general, business looming in almost every section of the country.

Activities of the Dealer Associations

Hoosiers Get New Ruling

INDIANAPOLIS, IND., Aug. 22—The Indiana Automotive Trade Association has received a new ruling, affecting perhaps 20,000 to 100,000 motor vehicles in Indiana and about 1,200 automobile businesses engaged in repairing tops, announced by the treasury department, bureau of internal revenue, whereby thousands of dollars will be saved to automobile trim shops of Indiana and elsewhere. L. M. Shaw, manager of the trade association, states the ruling resulted from the complaint of the Single Center Buggy Co. of Evansville, filed through the trade association with Bert Thurman, collector of internal revenue. A tax drive was started by collectors from the Indianapolis office in the southern part of the state, and in Evansville they checked up the buggy company, levying taxes on automobile top covers, side curtains, etc., which had been made up and applied to old cars in process of repair. Taxes, penalties and interest were assessed in a schedule that went back to Feb. 24, 1919. A similar assessment was made against every Indiana concern rebuilding automobile tops, and makers of automobile tops "for immediate use on old top bows in repair jobs" who were originally exempt, will not be by the ruling of A. W. Holden, acting deputy commissioner in the revenue bureau, who amended the section to read that such tops were taxable.

Sacramento Out of Fair

SACRAMENTO, CAL., Aug. 22—The Sacramento Motor Car Dealers Association has voted against participation in the automobile show at the State Fair this year. As individuals, some will have displays; the association will take no part in its management, as heretofore.

This step was taken, members of the association say, as a protest against the shabby treatment accorded the automobile show by the fair management. The automobile display is just about the most valuable in point of the value of the exhibits of any within the walls of the fair. Yet the dealers have been compelled to show their cars in a tent, and no suitable arrangements are made to protect the automobiles from handling. The result has been that every car exhibited, the dealers say, has been taken to the paint shop after the show.

The fair management has sold the tent for a lump sum to the association, which in turn has sold space to its members. A small reduction made this year would not protect the association from loss, its officers say, and they decided to keep out.

The association feels, too, that the fair is a state-wide event, and that the Sacramento dealers should not be called upon to bear the expense of the displays. Several distributors have refused to co-operate, and this has accentuated the trouble. Secretary Charles Paine of the fair says the automobile show will be as big as ever, and that the space all has been reserved, despite the action of the dealers' organization, but members of the latter say the show will be the poorest in years.

Los Angeles for Safety

LOS ANGELES, Aug. 22—At the meeting of the Motor Car Dealers Association it was

agreed that the place of the automobile dealers in the crusade now being waged here to prevent motor vehicle accidents is out in front. As expressed by one speaker, the dealers should be leading the campaign against reckless driving as a means of self-protection. The assertion was made that reckless operation has become so general that there are intending car buyers who will not make the purchase because they are afraid to drive on the streets and highways. The California state law permits 35 miles an hour on the open highway, but arrests seldom are made for a speed less than 40 miles an hour, and, with the exception of one, county jail sentences for any speed are rarely imposed.

It was agreed that the dealers should start on an educational campaign and begin within their own organizations. Instructions are to be issued that demonstrating and service cars must at all times be operated within the requirements of the law. It has been the custom in the past for dealers who had an influence with the courts to exercise this influence in behalf of errant customers and get their cases "fixed" so that fines were not paid. One of the dealers pledged himself to refrain in the future from such intercession.

A newspaper publicity campaign probably will be decided upon so that the public can be advised the dealers deprecate rather than encourage the use of vehicles in violation of the law. A committee consisting of representatives of the association, the automobile editors of the newspapers and others will be appointed to devise a concrete plan of operation to be followed in the future.

Philadelphia Protests Tax

PHILADELPHIA, Aug. 22—Since the recent launching of the owner-membership campaign by the Motor Truck Association of Philadelphia—the biggest news event in Philadelphia motor circles this year—in conjunction with the motor truck organization of Pittsburgh, to include, if possible, every owner in the State, in addition to dealers and distributors, the association in this city has protested to members of the United States Senate and House of Representatives against the proposed \$10 federal license fee on all automobiles. This mailed protest will be followed by personal solicitation among the legislators.

The membership campaign is bringing big results from all over the State and every mail brings in applications.

Georgia Dealers Incorporate

ATLANTA, GA., Aug. 22—The Georgia Automotive Dealers Association has been incorporated under the laws of Georgia for a period of 20 years. The association has been in existence for some years, but was never incorporated. The petition for charter states that the purpose of the organization is "to encourage co-operation between dealers in automobiles and automobile accessories; to help build roads and highways; and to better conditions in the automotive industry."

The incorporators named in the petition, all of whom are well known dealers in the state, were Volney Williams, of Waycross, Ga., president; D. M. Lyon, A. S. Hatcher, Tom Wisdom, W. E. Cody, D. C. Black,

R. Willis Heard, Thad Huckabee, W. G. Turpin, Burrell Cole, Robert H. Martin, W. T. Waters, E. W. Best, W. C. Denny, A. R. Williamson, G. W. Gilmore, W. L. Roberts and F. A. Roberts. P. A. Megahee is secretary of the organization.

Columbia Is Rewarded

COLUMBIA, S. C., Aug. 22—The Columbia Automotive Trades Association has been fighting for sometime to have all cars sold by Columbia concerns to be direct from the factory rather than through some distributor in other States. The association's efforts have been rewarded to a great extent, the two latest factories to make connection here being the Maxwell and Chalmers. Previous to this time all Maxwell and Chalmers cars have been coming through Charlotte, N. C. The Carolina Automobile Company has been appointed distributor here for the two makes of cars, and hereafter South Carolina distribution will be from this city. Holmes Simons is manager of the Carolina company.

Memphis Dealers Use Checks

MEMPHIS, TENN., Aug. 22—The majority of the members of the Memphis Automobile Dealers Association at their luncheon the week end agreed to discontinue cash payrolls. Checks are to be used to minimize the danger to the life of the employees who secure payroll money from the banks. The action was taken on the recommendation of Steve H. Butler, president of the Association. Similar action has been taken by many firms, individually since the recent hold up a week ago, when an attempt was made to secure the \$8,000 payroll of the Ford Plant on Union Ave. near the Southern R. R., Memphis, when four men were killed and several shot, including some policemen attempting the capture of the bandits. The payroll was rescued however. The attempt caused a great amount of indignation and a law and order meeting at Memphis laid down rules to prevent any recurrence or chance of similar attempts.

Used Car Depot in Utica

UTICA, N. Y., Aug. 22—The Utica Motor Dealers Association, Inc., on Aug. 1, opened a used car exchange, which has been placed under the management of a successful local used car dealer. The success of the first two weeks of operation has resulted in the determination of dealers to take immediate steps to enlarge the scope of the project. A used car report showing the actual sale price of cars sold is now being made up monthly and is found to be of considerable value in making allowances on cars offered for trade. The plan is supported by 28 of the 34 car dealers in Utica.

Effective July 15, the majority of the dealers began collecting cash for all service and parts, and the method is proving satisfactory and has been responsible for doing away with monthly charging, which in some instances ran as high as \$4,000. It has also eliminated the source of irritation to car owner and service man, as "kicks" are now received at the time the job is completed, and not several weeks after, when the monthly statements were paid under the old plan.

Happenings in the Industry

Haynes & Co., Inc., motor trucks, New York, has filed a petition in bankruptcy, listing liabilities of \$34,434 and assets of \$36,001.

Stapleton-Brown Motor Co., Dallas, Tex., has added the **Briscoe** line of cars to its list. It will handle the **Briscoe** in north Texas.

William J. Bruehl has been appointed wholesale solicitor for the **Traffic Motor Truck Corp.**, working out of the eastern office, located in Philadelphia.

Southern Bearing Co. has been organized and incorporated at Charlotte, N. C., with a capital stock of \$10,000 by R. M. Schnore of Atlanta, Ga., and J. H. Nothey of Charlotte.

G. W. Helwan, Philadelphia branch manager of the **Miller Rubber Co.**, has resigned to accept the branch managership in charge of the Philadelphia territory for the **Mason Tire & Rubber Co.**

St. Charles Garage Co., St. Louis, has plans under way for a four-story service and repair building to cost about \$300,000, including equipment. **T. S. Kirkpatrick** is one of the heads of the company.

R. Scott Smith, Jr., manager of the Camden, N. J., branch of the **Neel-Cadillac Co.** of Philadelphia, was promoted to the directorate of the company at the last meeting of the officers and directors.

F. E. Valentine, formerly Nash distributor at Sherman, Tex., is now associated with the **Nash-McLarty Co.**, Dallas. He is manager of the wholesale department of the company, assuming his duties at once.

Fordham Plaza Automobile Co., Brooklyn, is having plans prepared for its three-story and basement automobile service and repair works, estimated to cost about \$150,000. **Charles W. Clark** is architect.

Motor Car Service Co., Dallas, Tex., is one of the newest automotive concerns in Dallas. **Roy A. Houston** and **C. W. Heck** are proprietors. The company conducts a general repair shop and filling station.

Republic Motor Truck Sales Co., Alma, Mich., has opened a southeastern branch in Atlanta with **F. W. Stuart** of Atlanta manager. North and central Georgia and part of Tennessee include the territory of the branch.

Grant Motor Sales Co. of Wilkes-Barre, Pa., has been appointed distributors for **Traffic truck** in Luzerne County. The **Traffic Motor Truck Corp.** has appointed **J. Flickinger & Son** as distributors for **Traffic truck** in Pottstown, Pa.

Alford Motor Co., Atlanta, has been appointed wholesale and retail dealers for Atlanta and northern Georgia for **Lexington Motor Cars**. **Dr. H. N. Alford** is president, and **B. F. Tull** sales manager. The company has opened the showrooms and service station.

George Stowe, former manager of the New York branch of the **Mitchell Motors Co.**, has been appointed general manager of the **Reo Motor Car Co.** of New York to succeed **James J. Hunt**. **Stowe** was New York manager for the **Chalmers Motor Car Co.** before going with **Mitchell**.

Buick dealers of Dallas, Tex., and vicinity met in Dallas for the purpose of looking over the new models and lining up for the early

fall business. More than one hundred dealers and agents were present. All dealers declared indications pointed to big business for the remainder of the year.

Claude Fageol, Oakland, Cal., one of the best known men in the motor car industry of northern California, whose connection with the automobile business dates back to the days when the old Rambler was the car of the day, has been appointed sales manager of the **Pacific Nash Motors Co.**, with headquarters in Oakland.

William H. Herbert has been appointed general sales manager of the **Denby Motor Truck Co.**, succeeding **L. B. Graham**, resigned. **Mr. Herbert** is one of the oldest members in point of service of the **Denby** organization, having served as special field representative, assistant sales manager and manager of the **Denby Detroit branch**.

Texas Paige Co., Dallas, Tex., held open house to more than five hundred visitors. The occasion was the introducing of the new **Paige** model. All departments of the company were thrown open to the visitors and experts were detailed to explain the workings of each department. Several **Paiges** were sold as a result of the housewarming.

Western Auto Supply Co., Oakland, Cal., capitalized at \$3,000,000 and operating a large chain of automobile accessory stores throughout the west, has just announced the purchase of eight stores operated by the **Autoparts Supply Co.**, a half million dollar corporation operating in Portland, Seattle, Tacoma, Spokane, Yakima, Walla Walla, Boise and Bellingham.

S. G. Davis Motor Car Co., Dallas, Tex., handling Oldsmobile cars and trucks, has closed the seventh annual contract for the Oldsmobile in north Texas. The company also obtained considerable additional territory, embracing central Texas, northwest Texas and parts of west Texas. Dealers will be established in all parts of the new and old territory, it was announced.

Fidelity Automobile Supply Co., Kansas City, established two years ago, has bought the **Automotive Supply Co.**, which has been operating for about four years. The latter company suspends. The officers of the **Fidelity Automobile Supply Co.** are **R. O. Douglas**, president; **R. B. Douglas**, secretary and manager; **R. B. Gleason**, **E. Graham**, vice-presidents, and **H. S. Coe**, treasurer.

E. A. Haertlein has been appointed sales manager of the **Gemco Mfg. Co.**, Milwaukee, a large manufacturer of automotive equipment and garage fixtures. He succeeds **George H. Treviranus**, who resigned to become associated with a new concern now in process of organization in Milwaukee to engage in the manufacture of rowboat motors and other small internal combustion engines.

Wm. B. Moyle, formerly with the **Studebaker** interests on the coast, has been named general sales manager of the **Cole Motors, Inc.**, distributing the **Cole** throughout northern California, Nevada and the islands of the Pacific. **Moyle** will handle both the wholesale and retail sales of the organization and supervise the advertising as well. He will make his headquarters in San Francisco.

A. H. Allen, Spartanburg, S. C., formerly with the **Olds Motor Works** of the **General Motors Co.**, has formed a partnership with

J. J. Brown under the name of the **Carolina Motors Co.** **Allen** is president and general manager and **Brown** secretary and treasurer. They will be distributors of **Oldsmobiles** in South Carolina. For eleven years **Allen** was with the **General Motors Co.** and carried their lines to South America and Cuba.

Frank B. Allen, for some years a partner of the **C. E. Fay-Allen Co.**, Boston, Mass., has resigned his interests in the company and has formed his own company to handle the **Wills St. Claire** car exclusively for New England. The **C. E. Fay-Allen Co.** had the **Wills St. Claire** and the **Maxwell Chalmers**. **Fay** has reorganized his company as the **C. E. Fay Co.** and will continue the **Maxwell Chalmers** line in his salesrooms, while **Allen** will secure a sales and service station elsewhere.

Tracy Sales Co. of Toledo, Ohio, of which **Thomas H. Tracy, Jr.**, is head, has been organized here to distribute the **Briscoe** car. It is thought that the acquaintance which **Clarence Earl** made here as vice-president of the **Willys-Overland Co.** will go far in putting the new car into the market here. **Earl** is now president of the **Briscoe** company. **Orville B. Briggs** is associated with **Tracy** in the new distributing company. They will have charge of several agencies in northern Ohio.

Eddie Pullen and **Glover Ruckstell** are team-mates again. The two former pilots of the **Mercer** racing team who won fame and fortune with the **Mercer** in the days of **Finley R. Porter**, are no longer in the speed profession, however, **Ruckstell** is president of the **Ruckstell Sales & Mfg. Co.**, Berkeley, Cal., and **Pullen** is associated with him in the company, having charge of **Ruckstell's** Los Angeles branch. The **Ruckstell** company is manufacturing and marketing a product, known as the **Perfecto** two-speed axle for **Ford** cars, and **Pullen** is breaking records as a salesman.

W. A. Sellon has been appointed as manager of the **Poertner Motor Car Co.** for Brooklyn and Long Island, handling the sales of the new **Durant** car. **Sellon** first went to Brooklyn, leaving the **E. R. Thomas Motor Co.** to join the Brooklyn staff of the **Detroit Motor Car Co.** His work brought him to the attention of **W. C. Durant**, the founder of the **Buick Motor Co.** and one of the leading figures in the upbuilding of **Cadillac**, **Oldsmobile**, **Oakland** and other well known cars and trucks. **Sellon**, in 1919, was secretary of the **Brooklyn Motor Vehicle Dealers' Association**.

Federal Automotive Sales Co. has been incorporated to distribute **Penberthy** products in the states of Ohio, Michigan, Illinois and Indiana. The incorporators of the company include several men who have been prominent figures in the automotive industry for years. **E. H. Jones**, who is president of the company, and **R. P. Flower**, vice-president, were for a number of years connected with the **Interstate Foundry**, cast steel wheel division. **Walter C. Voss**, who is secretary and treasurer, was with the **Standard Parts Co.** for a number of years, acting as their Washington representative during the war and later was associated with the **L. D. Rockwell Co.** It is an Ohio corporation, and the main office will be in Detroit. The company will also maintain offices in Chicago and Cleveland.

COMING EVENTS

SHOWS

Toronto, Can.	Aug. 27	Canadian National Automobile Show.
Milwaukee	Aug. 29-Sept. 3	Annual Fall Automobile Show at Wisconsin State Fair, Milwaukee Automobile Dealers Association.
Indianapolis	Sept. 5-10	Automobile and Accessory Show in conjunction with Indiana State Fair, conducted by Indianapolis Automotive Trade Ass'n, John B. Orman, Mgr.
Ottawa, Ont.	Sept. 9 to 17	Ottawa Motor Show.
Cincinnati	Oct. 1-8	Fall Automobile Show, Cincinnati Automotive Dealers' Ass'n, Music Hall.
Pittsburgh	Oct. 15-22	Fall Show under auspices of Automotive Association.
New York	Nov. 27-Dec. 3	Automobile Salon, Hotel Commodore.
Chicago	January	Automobile Salon, Drake Hotel.
New York	Jan. 7-13	National Automobile Show, under auspices of National Automobile Chamber of Commerce, Madison Square Garden.
Louisville, Ky.	Feb. 20 to 25	Louisville Automobile Show, auspices Louisville Automobile Dealers' Association.

Chicago	Jan. 28-Feb. 3, 1922	National Automobile Show, under auspices of National Automobile Chamber of Commerce, Coliseum.
Winnipeg	Feb. 6-11, 1922	Automobile Equipment Show, Western Canada Automotive Association.
Santiago, Cuba	March, 1922	Annual Automobile Show.
Rio de Janeiro, Brazil	Sept., 1922	Automotive Exhibition in connection with Brazilian Centenary.

RACES

Uniontown, Pa.	Labor Day	Autumn Classic.
Los Angeles	Nov. 24	Speedway Events.

CONVENTIONS

Chicago	Oct. 12-14	National Implement & Vehicle Association Convention, Congress Hotel.
Chicago	Nov. 14-19	Annual Meeting and Business Exhibit of Automotive Equipment Association.
New York City	Nov. 22-24	Semi-Annual Convention of Factory Service Managers, N. A. C. C., H. R. Cobligh, Secretary.

The New Car and Truck Description Index

Giving the date and page number on which they appeared

Cars

Ace	Jan. 12, 1921-15
Ambassador	Feb. 2, 1921-11
Bulck Four	Aug. 10, 1921-28
Collinet (Salon)	Nov. 24, 1920-18
Durant Four	Aug. 10, 1921-30
Duesenberg 8	Nov. 17, 1920-33
Essex (Cabriolet)	Nov. 10, 1920-35
Fergus, 1921	Jan. 12, 1921-23
Forster	Aug. 25, 1920-33
Friend	Jan. 12, 1921-14
Globe Four	Oct. 20, 1920-32
Handley-Knight Four	Nov. 17, 1920-32
Haynes Model 50	Jan. 12, 1921-20
Jackson Four	Jan. 12, 1921-18
Kelsey	Dec. 1, 1920-31
Kenworthy 8	Jan. 12, 1921-13
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Lafayette (Coupe)	Oct. 27, 1920-40
Lexington Series T	Jan. 6, 1921-32
Liberty (Coupe)	Aug. 18, 1920-31
Lincoln	Sept. 8, 1920-34
McFarlan Type 147	Oct. 27, 1920-41
Mercer (Limousine)	Aug. 18, 1920-37
Mercedes (Post War Model)	Oct. 20, 1920-33
Milburn Electric (38D & 38T)	Jan. 12, 1921-21
Moller	Mar. 30, 1921-21
Nash Four	Nov. 10, 1920-34
National (Sextet Phaeton)	Dec. 15, 1920-36
Navarre	Jan. 12, 1921-13
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Oldsmobile Light 8	Mar. 9, 1921-33
Oldsmobile (Model 43-A)	Dec. 15, 1920-33
Packard Single Six	Sept. 29, 1920-32
Paige Big Six (Six-66)	Sept. 1, 1920-34
Parenti	Jan. 12, 1921-14
Piedmont 4.80	June 29, 1921-30
Pierce-Arrow	Nov. 24, 1920-32
Premocar Special	Feb. 9, 1921-23
Rolls-Royce	Mar. 23, 1921-32
R & V Knight Four	Jan. 12, 1921-16
Scripps-Booth Six	July 13, 1921-32
Sheridan Eight	Oct. 6, 1920-32
Stanwood Six	Sept. 15, 1920-31
Sterling Knight	Feb. 2, 1921-11
Stevens-Duryea	Dec. 1, 1920-30
Wills-Sainte Claire	Mar. 16, 1921-28
Wills Sainte Claire Roadster	July 20, 1921-33

Trucks

Acme (½ ton)	April 13, 1921-33
Akron Multitruck (1 ton)	Feb. 9, 1921-32
Aries (5 ton)	Jan. 12, 1921-49
Armleder (1 ton)	Nov. 10, 1920-37

Available (1½ ton)	Aug. 4, 1920-32
Avery (1 ton)	Nov. 10, 1920-36
Bessemer (4 ton)	Jan. 12, 1921-30
Bollstrom (4 ton)	Nov. 24, 1920-34
Bridgeport (1½, 2½ & 6 ton)	Jan. 12, 1921-30
Brockway (Highway Express)	Jan. 26, 1921-25
Case (2 ton)	Feb. 16, 1921-16
Clinton (1½, 2½, 3½ & 5 ton)	Jan. 12, 1921-30
Commerce (Mercantile Exp.)	Nov. 10, 1920-37
Cyclone (1½ ton)	Mar. 30, 1921-32
Duplex (2½ ton)	Aug. 18, 1920-31
Federal (5-6 ton)	May 4, 1921-32
Gramm-Bernstein (1 ton)	Nov. 10, 1920-35
G. & J. (2 & 3½ ton)	May 11, 1921-32
G. M. C. (K-15, ½ ton; K-16, 1 ton; K-41, 3½ ton; K-101, 5 ton)	Mar. 2, 1921-28
Huffman (Models B & C 1 & 2½ tons)	June 29, 1921-30
Inter Harvester (¾ ton)	Feb. 16, 1921-32
Kissel Speed Truck (1 ton)	Mar. 23, 1921-32
Lone Star (1½ ton)	Oct. 27, 1920-30
Lorain (2 ton)	Sept. 1, 1920-30
Mack (double red, axles)	Jan. 5, 1921-32
Moline farm truck (1½ ton)	Nov. 10, 1920-36
Pierce-Arrow (2 ton x 5, 3½ ton, W-2, 5 ton, r-10)	Sept. 8, 1920-30
Rainier (¾ & 5 ton)	Jan. 12, 1921-31
Republic (¾ ton)	July 20, 1921-33
Republic Express, Model 10	Mar. 30, 1921-21
Rumely (1½ ton)	Nov. 10, 1920-36
Service Speed Wagon (1 ton)	Feb. 16, 1921-22
Standard 5-K (5 ton)	Apr. 13, 1921-33
Stoughton (1 ton)	Feb. 23, 1921-32
Stoughton (1½, 2 & 3 ton)	Aug. 25, 1920-33
Transport (¾ ton)	Nov. 3, 1920-31
Ward La France (5 ton)	Jan. 12, 1921-30
Winther	Feb. 2, 1921-11

STUDEBAKER PREDICTS BEST AUGUST IN HISTORY

NEW YORK, Aug. 22—The New York branch of the Studebaker Corp. reports that this month probably will be the best August in its history, although comparison with previous months indicates that the company is feeling some of the effects of seasonal let-up in automobile buying.

The best month the New York branch ever enjoyed was last June, when 451 vehicles were sold. July deliveries were

328 cars and indications are that August sales will run about 90 per cent of July, or something like 300 machines.

There is an unusually heavy demand for Studebaker enclosed cars in the metropolitan district.

A Correction

Through a typographical error in the August 3 issue of Motor World, page 37, it was stated that the home of the Oakland car in Philadelphia had been closed whereas it should have said leased.

COMPLETE PLANS FOR MEMPHIS MOTOR SHOW

MEMPHIS, TENN., Aug. 22—The preliminaries are nearly completed for the automobile show at the fourteenth annual Tri-State Fair, Sept. 24 to Oct. 1, following a conference between F. D. Fuller, secretary of the body, and a committee representing the Memphis Automobile Dealers Association. The show will be held in a new building, erected last year, occupying a space 70 x 300 ft.

Specifications of Current Passenger Car Models

NAME AND MODEL	Eng. Make	Cylinders: Bore and Stroke	WB	Tires	2-Pass.	5-Pass.	7-Pass.	Coupe	Sedan	NAME AND MODEL	Eng. Make	Cylinders: Bore and Stroke	WB	Tires	2-Pass.	5-Pass.	7-Pass.	Coupe	Sedan
Ace	Guy	6-3 1/2 x 5	123	32 x 4	\$2975	\$2975		\$3630	\$3680	Maibohm	B	6-3 1/2 x 4 1/2	116	32 x 4	\$1575	\$1575	\$1750	\$2395	\$2385
Ace	H-S	6-3 1/2 x 5	123	32 x 4	2075	2975		3680	3680	Marmen	34	6-3 1/2 x 5 1/2	136	32 x 4 1/2	4185	13985	3985	4875	5275
Ace	H-S	4-3 1/2 x 5	116	32 x 4	2260	2260				Maxwell	25	4-3 1/2 x 4 1/2	109	30 x 3 1/2	845	845		1445	1545
Allen	Series 43	6-3 1/2 x 5	110	32 x 4	\$1385	1385			2195	McFarlan	1921	6-4 1/2 x 5	140	33 x 5	6300	16300	6300	7500	7600
Ambassador	R	6-3 1/2 x 5 1/2	136	33 x 5	14500	14500				Mercer	Series 5	6-3 1/2 x 5 1/2	132	32 x 4 1/2	4500	14500			
American	C	6-3 1/2 x 5	127	32 x 4	2195	2195			3150	Merit	Cont.	6-3 1/2 x 4 1/2	119	32 x 4	2245	2245			
Anderson	Series 40	6-3 1/2 x 5 1/2	120	32 x 4	2195	1815	2795	2795		Meteor	R&RR	4-4 1/2 x 6	129	32 x 4 1/2	5500	5500			
Apperson	8-21-S	8-3 1/2 x 5	130	34 x 4 1/2		3000	3250	4500	4500	Metz	M6	6-3 1/2 x 5	120	32 x 4	1995	1995		2785	2895
Apperson	Anniversary	8-3 1/2 x 5	130	34 x 4 1/2		3500	3750			Mitchell	F-40	6-3 1/2 x 5	120	32 x 4	1490	1490		2590	2890
Auburn	6-51	6-3 1/2 x 4 1/2	121	32 x 4	1670	1695	1760	2475	2495	Mitchell	F-42	6-3 1/2 x 5	127	33 x 4			1795		
Beggs	20T	6-3 1/2 x 4 1/2	120	33 x 4	1775	1775		2675	2775	Moller	A	4-2 1/2 x 4	100	27 x 3 1/2	3000				
Ball	4-32	4-3 1/2 x 5	114	31 x 4		1495				Monroe	S-9 & 10	4-3 1/2 x 4 1/2	115	32 x 3 1/2	1295	1295			
Ball	6-50	6-3 1/2 x 5	124	32 x 4		1695				Monroe	S-11 & 12	4-3 1/2 x 4 1/2	115	32 x 3 1/2			2075	2175	
Biddle	81	4-3 1/2 x 5 1/2	121	32 x 4	3475	3475			3975	Moore	6-48	6-3 1/2 x 4 1/2	122	32 x 4	2085	1085	2485	2985	3485
Birch Super-Four	H-S	4-3 1/2 x 5	117	33 x 4	1195	1195	1245	2295	1795	Moore	6-68	6-3 1/2 x 4 1/2	125	32 x 4 1/2			2485	3485	
Birch Light Four	Leit.	4-3 1/2 x 5 1/2	108	30 x 3 1/2	1045	1045				Murray-Mac Six	6-68	6-3 1/2 x 5 1/2	128	34 x 4 1/2	4250	4250			
Birch Light Six	H-S	6-3 1/2 x 5	117	33 x 4	1395	1395				Nash	681-7	6-3 1/2 x 5	121	33 x 4	1525	1545	11695	2395	2695
Bour-Davis	21S	6-3 1/2 x 5 1/2	126	32 x 4 1/2	12385	12385	2385			Nash	682	6-3 1/2 x 5	127	34 x 4 1/2			1695		
Brewster	91	4-4 x 5 1/2	125	32 x 4 1/2	17000	7000		10500		Nash Four	41-4	4-3 1/2 x 5	112	32 x 3 1/2	1175	1195	1735	1935	
Briscoe	4-34	4-3 1/2 x 5	109	31 x 4	1085	1085		1685	1685	National Six	5B	6-3 1/2 x 5 1/2	130	32 x 4 1/2	2990	12990	2990	3990	3990
Brook	S-21 A	2-3 1/2 x 5 1/2	90	28 x 3	395					Nelson	D	4-3 1/2 x 5 1/2	104	32 x 4		1900			
Buick	1922-34-35-36-37	6-3 1/2 x 5 1/2	109	31 x 4	935	975		1475	1650	Noma	1C	6-3 1/2 x 5 1/2	128	32 x 4 1/2	3000	13200		4450	
Buick	1922-11-S-6-7	6-3 1/2 x 5 1/2	118	33 x 4 1/2	1495	1525		2135	2435	Northway	Cont.	6-3 1/2 x 5 1/2	123	33 x 5	4200	4200	6000	5600	5400
Buick	1922-48-9-50	6-3 1/2 x 5 1/2	124	34 x 4 1/2			1735	2325	2635	Norwalk	438-KS	4-3 1/2 x 5	116	32 x 3 1/2		1035			
Bush	E.C.	4-3 1/2 x 5	116	33 x 4		1195				Oakland	34-C	6-2 1/2 x 4 1/2	115	32 x 4	1095	1145		1625	1725
Bush	E.C.	6-3 1/2 x 5	116	33 x 4		1345		1750	1850	Ogden	6-60	6-3 1/2 x 5 1/2	134	33 x 5	13850	3750	3900	5000	5100
Cadillac	59	8-3 1/2 x 5 1/2	132	35 x 5	3790	13790		4950	5190	Oldsmobile	43-A	4-3 1/2 x 5 1/2	115	32 x 4	1125	1345		1895	2100
Carroll	C	6-3 1/2 x 5	128	32 x 4 1/2	3185	3185		2900	3285	Oldsmobile	37A	6-2 1/2 x 4 1/2	112	32 x 4	11450	1450		2145	2145
Carr	V	6-3 1/2 x 5 1/2	126	34 x 4 1/2	12250			2295	2445	Oldsmobile	46	8-2 1/2 x 4 1/2	122	33 x 4 1/2		11825	1875		2775
Chalmers	6-30	6-3 1/2 x 4 1/2	117	32 x 4	1495	1545				Oldsmobile	47	8-2 1/2 x 4 1/2	115	32 x 4		11725		2225	2425
Chalmers	6-30	6-3 1/2 x 4 1/2	122	33 x 4 1/2			1795			Overland	4	4-3 1/2 x 4	100	30 x 3 1/2	905		1000	1275	
Champion	Tourist	4-3 1/2 x 5	113	32 x 3 1/2		1095				Packard	Single-Six	6-3 1/2 x 4 1/2	116	33 x 4 1/2	2075	2975	3750	3975	
Champion	Special	4-3 1/2 x 5	118	32 x 4	11395	1395		2785	2885	Packard	Twins Six	12-3	136	35 x 5	4850	4850	6000	6000	
Chandler	Six	6-3 1/2 x 5	123	33 x 4	1785	1785		2785	2885	Paige	6-42	6-3 1/2 x 5	119	32 x 4	1625	1625	2410	2570	
Chrysler	490	4-3 1/2 x 4	102	30 x 3 1/2	625	625		975	975	Paige	6-66	6-3 1/2 x 5	131	33 x 4 1/2	12975	12975	2785	2785	3830
Chrysler	FB	4-3 1/2 x 5 1/2	110	33 x 4	975	975		1575	1575	Pan American	E-6-55	6-3 1/2 x 5	121	33 x 4	2000	2000			
Cleveland	49	6-3 x 4 1/2	112	32 x 4	1295	1295		2195	2295	Parenti	1921	8-2 1/2 x 4 1/2	125	32 x 4		2000			
Climber Four	H-S	4-3 1/2 x 5	115	33 x 4	1450	1385				Peterson	650	6-3 1/2 x 4 1/2	120	33 x 4		2000			
Climber Six	S-H-S	6-3 1/2 x 5	125 1/2	32 x 4 1/2	2250	2250				Pearless	56-S-7	6-3 1/2 x 5	125	34 x 4 1/2		1895	1625	2895	2895
Cole	870	8-3 1/2 x 4 1/2	127	33 x 5	2550	12695	2795	3895	3995	Peters	Cont.	2-3 1/2 x 2 1/2	90	28 x 3	885		1290		
Columbia	Challenger	6-3 1/2 x 5	115	32 x 4		1195		11995	1995	Piedmont	4-30	4-3 1/2 x 5	116	32 x 3 1/2					
Columbia	D-C&CS	6-3 1/2 x 4 1/2	115	32 x 4	1475	1475		12295	2350	Piedmont	6-40	6-3 1/2 x 4 1/2	122	32 x 4		1495			
Comet	C-53	6-3 1/2 x 5 1/2	125	33 x 4 1/2		2350	2450		3650	Pierce-Arrow	Cont.	6-4 1/2 x 5 1/2	138	33 x 5	7000	16500	6500	8000	8800
Commonwealth	44	4-3 1/2 x 5	117	32 x 4		1395			2465	Pilot	6-45	6-3 1/2 x 5	120	32 x 4	1945	1895		3150	3400
Crawford	21-40	6-3 1/2 x 5 1/2	122 1/2	32 x 4	3000	3000	3000		4500	Pilot	6-50	6-3 1/2 x 5	126	32 x 4 1/2	2285	2285	2335		
Crow-Elihart	L-61-65	4-3 1/2 x 5	117	32 x 3 1/2	11295	1295				Porter	40	4-4 1/2 x 6 1/2	142	35 x 5	4750	4750			
Crow-Elihart	S-61-65	6-3 1/2 x 5	117	32 x 3 1/2	11545	1545			2395	Premier	6-D	6-3 1/2 x 5 1/2	126 1/2	33 x 5	3780	13690	3890	4600	5190
Daimler	D-19	8-3 1/2 x 5 1/2	132	34 x 4 1/2	15350	15350	5350	6250	6950	Premcar	6-40 A	6-3 1/2 x 4 1/2	117	33 x 4	1295				
Daimler	61-67	6-3 1/2 x 4 1/2	120	32 x 4	11995	1895	12150	2795	2795	Raleigh	A-6-60	6-3 1/2 x 5	122	32 x 4 1/2	2250	2250	3100	3200	
Dispatch	H-S	4-3 1/2 x 5	120	34 x 4	1250	1350	1350	1525	1575	R & V Knight	R	4-3 1/2 x 5	116	32 x 4 1/2	2150	2150	2850	2850	
Disco Flyer	H-S-10	4-3 1/2 x 5	112	32 x 4	1445	1445		2295	2345	R & V Knight	J	6-3 1/2 x 4 1/2	127	32 x 4 1/2	3360	13360	3360	4100	4200
Dodge Brothers	6-50	4-3 1/2 x 4 1/2	112	32 x 4	935	985		1535	1785	Revere	T-6	6-3 1/2 x 5	120	33 x 4	1650	1650	2700	2750	
Dorris	6-50	6-4 x 5	132	33 x 5		14785	4785	5800	6090	Revere	C	4-4 1/2 x 6	131	32 x 4 1/2	4500	14650		5600	
Dort	17-12	4-3 1/2 x 5	108	31 x 4	985	985		1535	1635	Reamer	6-54-E	6-3 1/2 x 5	128	32 x 4 1/2	3150	15150	3250	15985	14100
Driggs	Cont.	4-2 1/2 x 4 1/2	104	30 x 3 1/2	1275	1275			1975	Rolls-Royce	4-75-E	4-4 1/2 x 6	128	32 x 4 1/2	4150	3995			
Duesenberg	Cont.	8-2 1/2 x 5	138 1/2	33 x 5	5600	5600		7500		Romer	Cont.	6-3 1/2 x 4 1/2	120	32 x 4	2000	2000	2100	11780	2450
Dupont	A	4-3 1/2 x 5 1/2	124	32 x 4 1/2	3400	3400		4900		Saxon	125	4-3 1/2 x 5	112	32 x 4	1545	1495		2295	2295
Dumont	A-22	4-3 1/2 x 4 1/2	109	31 x 4		890		1365	1365	Sayers Six	DP	6-3 1/2 x 4 1/2	118	33 x 4	2145	1945		1985	1985
Eber	K-4	6-3 1/2 x 5	117	33 x 4	1195	1195		2395	2495	Scripps-Booth	B-39-42	6-2 1/2 x 4 1/2	115	32 x 4	11275	1295		1950	2100
Eber	7-R	6-3 1/2 x 4 1/2	117	33 x 4	11595	1595	11195	2395	2495	Scripps-Booth	F-43-46	6-3 1/2 x 4 1/2	115	32 x 4	1470	1490		2250	2375
Elgin	K-1	6-3 1/2 x 4 1/2	118	33 x 4	1595	1495	11595	2395	2395	Seneca	L & O	4-3 1/2 x 4	108	30 x 3 1/2	1045	1045			
Elgin	Cont.	4-3 1/2 x 5	108 1/2	32 x 4	1445	1445		1950	2300	Sevier	Six	6-3 1/2 x 5 1/2	122 1/2	33 x 4 1/2	1485	1485		2100	2250
Fergus	S-5-21	6-3 1/2 x 5	126	33 x 4 1/2		2695		3675		Sevier	Six	6-3 1/2 x 5 1/2	122 1/2	33 x 4 1/2	2550	2550		3240	3350
Ferris	C-22	6-3 1/2 x 5 1/2	130	32 x 4 1/2		2770		695	780	Skellon	35	4-3 1/2 x 5	127	32 x 3 1/2	995	995			
Ford	T	4-3 1/2 x 4	100	30 x 3 1/2	2850	2850	12550	3630	3630	Southern Six	660-2	6-3 1/2 x 5	127	32 x 4 1/2	2875	2875	2995		
Franklin	8-B	6-3 1/2 x 4	115	32 x 4	1285	1285		1985	2035	Standard	J	8-3 1/2 x 5	127	34 x 4 1/2	3400	13400	3400	4000	4800

Specifications of Current Motor Truck Models

NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive
				Front	Rear						Front	Rear						Front	Rear	
Acason	3 1/2	\$1650	3 1/2 x 5	34 x 5 1/2	34 x 5 1/2	W	Concord, AX	1 1/2	\$3250	4 x 5 1/2	36 x 3 1/2	36 x 6	W	Gary, F	1	\$2100	3 1/2 x 5	36 x 3 1/2	36 x 4	W
Acason, R	1 1/2	2260	3 1/2 x 5 1/2	36 x 3 1/2	36 x 5	W	Concord, BX	2 1/2	3600	4 1/2 x 5 1/2	36 x 4	36 x 8	W	Gary, I	1 1/2	2550	4 1/2 x 5 1/2	36 x 3 1/2	36 x 5	W
Acason, RB	1 1/2	2485	3 1/2 x 5 1/2	36 x 3 1/2	36 x 6	W	Cook, 41	2	3000	4 x 5 1/2	36 x 6	36 x 7	W	Gary, J	2 1/2	3150	4 1/2 x 5 1/2	36 x 4	36 x 7	W
Acason, H	2 1/2	3295	4 1/2 x 5 1/2	36 x 4	36 x 4 1/2	W	Corbett, E	1	2200	3 1/2 x 5	34 x 3 1/2	34 x 4	W	Gary, K	3 1/2	4050	4 1/2 x 6	36 x 5	40 x 5 1/2	W
Acason, L	3 1/2	4295	4 1/2 x 5 1/2	36 x 5	36 x 5 1/2	W	Corbett, D	1 1/2	2600	3 1/2 x 5	36 x 3 1/2	36 x 5	W	Gary, M	5	5150	5 x 6 1/2	36 x 6	40 x 6 1/2	W
Acason, M	5	5250	5 x 6 1/2	36 x 6	40 x 12	W	Corbett, C	2 1/2	3150	4 1/2 x 5 1/2	36 x 3 1/2	36 x 7	W	Gersin M	1 1/2	3100	4 x 5 1/2	36 x 3 1/2	36 x 7	W
Aco, C	1 1/2	2295	3 1/2 x 5 1/2	34 x 3 1/2	34 x 5	W	Corbett, B	2 1/2	3300	4 1/2 x 5 1/2	36 x 4	36 x 7	W	Gersin K	2 1/2	3500	4 1/2 x 5 1/2	36 x 4	36 x 8	W
Aco, A	2 1/2	2795	4 1/2 x 5 1/2	36 x 4	36 x 7	W	Corbett, A	3 1/2	4100	4 1/2 x 5 1/2	36 x 5	36 x 10	W	Giant, 15-A	1 1/2	3500	4 1/2 x 5 1/2	36 x 5	40 x 12	W
Acme, G	1 1/2	.....	3 1/2 x 5	35 x 5 1/2	35 x 5 1/2	W	Corbett, AA	5	5000	4 1/2 x 6	36 x 6	40 x 6 1/2	W	Giant, 15	1 1/2	2250	3 1/2 x 5	34 x 3 1/2	34 x 5	W
Acme, B	1 1/2	.....	3 1/2 x 5	34 x 3 1/2	34 x 5	W	Cyclone A	1 1/2	288 1/2	3 1/2 x 5	34 x 5 1/2	34 x 6	W	Giant, 16	2	3050	4 1/2 x 5 1/2	36 x 4	36 x 7	W
Acme, A	2 1/2	.....	4 1/2 x 5 1/2	36 x 4	36 x 7	W	Dart, S	1 1/2	.....	3 1/2 x 5 1/2	34 x 3 1/2	34 x 6	W	Giant, 17	3 1/2	4150	4 1/2 x 5 1/2	36 x 5	36 x 5 1/2	B
Acme, AC	2 1/2	.....	4 1/2 x 5 1/2	36 x 4	36 x 7	W	Dart, M	2 1/2	.....	4 1/2 x 5 1/2	36 x 4	36 x 7	W	Globe D-28	1 1/2	1495	3 1/2 x 5	33 x 4 1/2	33 x 4 1/2	B
Acme, C	3 1/2	.....	4 1/2 x 5 1/2	36 x 5	40 x 10	W	Dart, W	3 1/2	.....	4 1/2 x 6	36 x 5	36 x 10	W	Globe	1 1/2	1495	3 1/2 x 5	33 x 5	33 x 5	B
Acme, E	5	.....	4 1/2 x 6	36 x 6	40 x 12	W	Day-Elder, A	1	2100	3 1/2 x 5	34 x 3 1/2	34 x 4	W	Golden West, GH	3	5000	4 1/2 x 6	36 x 7	36 x 7	W
Akr-Multi-Trk 20	3 1/2	1995	4 x 5 1/2	34 x 5	34 x 5	B	Day-Elder, B	1 1/2	2300	3 1/2 x 5	34 x 3 1/2	34 x 5	W	Golden West, G	3 1/2	4500	4 1/2 x 6	36 x 6	36 x 6	W
All-Power, C	3 1/2	5900	4 1/2 x 6	36 x 7	36 x 10	W	Day-Elder, C	2	2750	4 1/2 x 5 1/2	36 x 4	36 x 7	W	Golden West, H	3 1/2	5000	4 1/2 x 6	36 x 6	36 x 6	W
All-American, B-1	1 1/2	1795	3 1/2 x 5	32 x 4	32 x 4	I	Day-Elder, D	2 1/2	3025	4 1/2 x 5 1/2	36 x 4	36 x 7	W	Golden West, I	3 1/2	5000	4 1/2 x 6	36 x 6	36 x 6	W
All-American C-1	1 1/2	2195	3 1/2 x 5	34 x 4	34 x 5	I	Day-Elder, E	3 1/2	3750	4 1/2 x 6	36 x 5	36 x 5 1/2	W	Golden West, K	7	6000	5 1/2 x 6	36 x 6	36 x 6	W
American, 25	2 1/2	3350	4 x 6	36 x 4	36 x 4 1/2	W	Day-Elder, F	5	4250	4 1/2 x 6	36 x 5	40 x 6 1/2	W	Golden West, HA	7	6000	4 1/2 x 6	36 x 6	36 x 10	W
American, 40	4	4275	4 1/2 x 6	36 x 5	36 x 5 1/2	W	Dearborn, F	1 1/2	2180	3 1/2 x 5 1/2	34 x 4	34 x 5	W	Geve, A-1	1 1/2	2495	3 1/2 x 5	35 x 5 1/2	35 x 6 1/2	I
Aper, G	1	1450 1/2	3 1/2 x 5	33 x 5 1/2	33 x 5 1/2	I	Dearborn, 48	2	2590	3 1/2 x 5 1/2	35 x 5 1/2	34 x 7 1/2	W	Graham Bros. A	1 1/2	2495	3 1/2 x 5	35 x 5 1/2	35 x 6 1/2	I
Aper, D	1 1/2	1915	3 1/2 x 5 1/2	34 x 3 1/2	34 x 4	I	Defiance, G	1	1975	3 1/2 x 5	35 x 5	35 x 5 1/2	I	Graham Bros. 10	1 1/2	1495	3 1/2 x 5	33 x 5 1/2	33 x 5 1/2	D
Aper, E	2 1/2	2895	4 1/2 x 5 1/2	36 x 4	36 x 7	I	Defiance, D	1 1/2	2550	3 1/2 x 5	35 x 5 1/2	35 x 6 1/2	I	Graham Bros. 15	1 1/2	2050	3 1/2 x 5	36 x 3 1/2	36 x 5	I
Aper, F	3 1/2	3975	4 1/2 x 6	36 x 5	36 x 10	I	Defiance, E	2	2750	3 1/2 x 5	35 x 5 1/2	35 x 7 1/2	I	Graham Bros. 20	2 1/2	2725	3 1/2 x 5	36 x 3 1/2	36 x 5	W
Armstrong, 20	1	.....	3 1/2 x 5 1/2	34 x 3 1/2	34 x 5	W	DeKalb, E2 1/2	2 1/2	2600	4 1/2 x 5 1/2	36 x 4	36 x 6	W	Graham Bros. 25	3 1/2	3175	4 1/2 x 5 1/2	36 x 4	36 x 7	W
Armstrong, HW	2 1/2	.....	4 1/2 x 5 1/2	36 x 4	36 x 7	W	DeKalb, E2	2 1/2	2250	4 1/2 x 5 1/2	34 x 3 1/2	34 x 5	W	Graham Bros. 30	3 1/2	3575	4 1/2 x 5 1/2	36 x 4	36 x 7	W
Armstrong, KW	3 1/2	.....	4 1/2 x 6	36 x 5	36 x 5 1/2	W	DeMartini 1 1/2	1 1/2	2600	4 1/2 x 5 1/2	34 x 3 1/2	34 x 6	W	Graham Bros. 35	3 1/2	4375	4 1/2 x 6	36 x 5	40 x 5 1/2	W
Atco, B	1 1/2	.....	3 1/2 x 5 1/2	34 x 5 1/2	36 x 6	I	DeMartini 2	2	3300	4 x 5 1/2	36 x 3 1/2	36 x 7	W	Graham Bros. 40	5	5275	4 1/2 x 6	36 x 6	40 x 6 1/2	W
Atco, BI	1 1/2	.....	3 1/2 x 5 1/2	34 x 5 1/2	36 x 6 1/2	I	DeMartini 3	3	4250	4 1/2 x 5 1/2	36 x 4	36 x 10	W	Hahn, J4	1	.....	3 1/2 x 5	34 x 5	34 x 5	W
Atco, A	2 1/2	.....	4 1/2 x 5 1/2	36 x 4	36 x 8	W	DeMartini 4	4	4800	4 1/2 x 6	36 x 5	36 x 12	W	Hahn, CD	1 1/2	.....	4 1/2 x 5 1/2	36 x 3 1/2	36 x 6	W
Atlas, MD	1	.....	3 1/2 x 5	32 x 4 1/2	32 x 4 1/2	W	Denby, 12	1	1825	3 1/2 x 5	35 x 5	35 x 6	I	Hahn, EE	2 1/2	.....	4 1/2 x 5 1/2	36 x 4	36 x 8	W
Atterbury, 29R	1 1/2	2775	3 1/2 x 5	34 x 3 1/2	34 x 5	W	Denby, 33	1 1/2	2300	3 1/2 x 5	35 x 5 1/2	35 x 7 1/2	I	Hahn, F	3 1/2	.....	4 1/2 x 6	36 x 6	36 x 10	W
Atterbury, 7CX	2 1/2	3375	4 1/2 x 5 1/2	36 x 4	36 x 4 1/2	W	Denby, 134	2	2600	3 1/2 x 5	36 x 3 1/2	36 x 6	I	Hahn, EF	5	.....	4 1/2 x 6	36 x 6	40 x 12	W
Atterbury, 7D	3 1/2	4175	4 1/2 x 5 1/2	36 x 5	40 x 5 1/2	W	Denby, 25	3	3300	4 1/2 x 5 1/2	36 x 4	36 x 7	I	Hal Far, E	1	2350	4 x 5	35 x 5 1/2	35 x 5 1/2	W
Atterbury, 8E	5	5575	4 1/2 x 6	36 x 6	40 x 6 1/2	D	Denby, 27	4	4200	4 1/2 x 5 1/2	36 x 5	36 x 5 1/2	I	Hal Far, F	2 1/2	3250	4 1/2 x 5 1/2	35 x 5	36 x 7	W
Autocar, 21UP	1 1/2	2400	4 1/2 x 5 1/2	34 x 4	34 x 5	D	Denby, 210	5	4850	4 1/2 x 6	36 x 6	40 x 6 1/2	W	Hal Far, G	3 1/2	4250	4 1/2 x 5 1/2	36 x 6	40 x 10 1/2	W
Autocar, 21UG	1 1/2	4350	4 1/2 x 5 1/2	34 x 5	36 x 10	D	Dependable, A	1 1/2	1650	3 1/2 x 5	34 x 3 1/2	34 x 5	W	Hall	1 1/2	3100	3 1/2 x 5	34 x 5 1/2	34 x 7	W
Autocar, 26T	1 1/2	4500	4 1/2 x 5 1/2	34 x 5	36 x 10	D	Dependable, B	2	2650	4 x 5 1/2	34 x 3 1/2	34 x 6	W	Hall	1 1/2	3275	4 1/2 x 5 1/2	36 x 4	36 x 6	W
Available, H1 1/2	1 1/2	2475	4 x 5 1/2	36 x 3 1/2	36 x 5	W	Dependable, C	2 1/2	2950	4 1/2 x 5 1/2	36 x 4	36 x 7	W	Hall	3 1/2	4100	4 1/2 x 5 1/2	36 x 5	36 x 5 1/2	W
Available, H2	2 1/2	2775	4 x 5 1/2	36 x 3 1/2	36 x 6	W	Dependable, D	3 1/2	3550	4 1/2 x 5 1/2	36 x 6	36 x 7	W	Hall	5	5100	4 1/2 x 5 1/2	36 x 5	40 x 6 1/2	W
Available, H2 1/2	3 1/2	4475	4 x 5 1/2	36 x 4	40 x 5 1/2	W	Dependable, E	1 1/2	2500	3 1/2 x 5	34 x 5 1/2	34 x 6 1/2	W	Harvey, WEA	1 1/2	2550	4 1/2 x 5 1/2	34 x 3 1/2	34 x 5	W
Available, H3 1/2	5	5375	4 1/2 x 6	36 x 6	40 x 12	W	Diamond-T, FS	1 1/2	2900	3 1/2 x 5 1/2	36 x 3 1/2	36 x 5	W	Harvey, WFA	2 1/2	3300	4 1/2 x 5 1/2	36 x 4	36 x 7	W
Available, H5	7	6000	5 x 6	36 x 6	40 x 14	B	Diamond-T, U	2 1/2	2650	3 1/2 x 5 1/2	36 x 3 1/2	36 x 5	W	Harvey, WHA	3 1/2	4300	4 1/2 x 6	36 x 5	36 x 5 1/2	W
Available, H7	1	.....	3 x 4	34 x 5 1/2	34 x 6 1/2	I	Diamond-T, T	3 1/2	3285	4 x 5 1/2	36 x 4	36 x 7	W	Harvey, WKA	5	5200	4 1/2 x 6	36 x 6	40 x 6 1/2	W
Avery	1	1800	3 1/2 x 5	34 x 3 1/2	34 x 4	I	Diamond-T, EL	5	4400	4 1/2 x 5 1/2	36 x 6	40 x 6 1/2	W	Hawkeye, K	1 1/2	1850				

Specifications of Current Motor Truck Models—Continued

NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive
				Front	Rear						Front	Rear						Front	Rear	
Kelly-S. K-45	4	\$4550	4 1/2 x 6 1/2	36x5	40x6 1/2	C	O. K., M1	3 1/2	\$4250	4 1/2 x 6	36x5	36x5d	W	Service, 51	2 1/2	\$3475	4 1/2 x 5 1/2	36x4	36x7	W
Kelly-S. K-50	4	4900	4 1/2 x 6 1/2	36x6	40x6d	C	Ogden, A1	1 1/2	2550	3 1/2 x 5	36x3 1/2	36x5	W	Service, 71	3 1/2	4285	4 1/2 x 5 1/2	36x5	36x5d	W
Kelly-S. K-60	6	5100	4 1/2 x 6 1/2	36x6	40x7d	C	Ogden, E	3 1/2	3250	4 1/2 x 5 1/2	36x4	36x7	W	Service, 76	3 1/2	4485	4 1/2 x 6	36x5	36x5d	W
Kelystone, 40	2	2450	3 1/2 x 5 1/2	34x5 1/2	38x7 1/2	I	Old Hickory, W	1	2175	3 1/2 x 5	36x3 1/2	36x4	W	Service, 101	5	5275	4 1/2 x 6	36x6	40x6d	W
Kimball, AB	2	3675	4 x 6	36x4	36x7	W	Old Reliable, A	1 1/2	2350	4 x 5	34x4	36x6	W	Signal, NF	1	2475	4 1/2 x 5	34x5 1/2	36x6 1/2	W
Kimball, AC	2 1/2	3975	4 1/2 x 6	36x4	36x8	W	Old Reliable, B	2 1/2	3500	4 1/2 x 6	34x4	36x4d	W	Signal, H	1 1/2	2925	4 1/2 x 5 1/2	34x4	36x6	W
Kimball, AK	3	4500	4 1/2 x 6	36x4	36x10	W	Old Reliable, C	3 1/2	4250	4 1/2 x 6	36x5	36x5d	W	Signal, J	2 1/2	3275	4 1/2 x 5 1/2	34x4	36x8	W
Kimball, AE	4	5000	4 1/2 x 6	36x5	40x12	W	Old Reliable, D	5	5250	4 1/2 x 6	36x6	40x6d	W	Signal, M	3 1/2	4275	4 1/2 x 5 1/2	36x5	40x5d	W
Kimball, AF	5	5975	5 x 6	36x6	40x7d	W	Old Reliable, KLM	7	6000	4 1/2 x 6 1/2	36x6	40x7d	C	Signal, R	5	5300	4 1/2 x 6	36x6	40x6d	W
Kinsol, Express	1	1985 1/2	3 1/2 x 5 1/2	34x5 1/2	34x5 1/2	W	Oldsmobile Econ.	1	1250	3 1/2 x 5 1/2	35x5 1/2	35x5 1/2	I	Southern, 10	1	2 90	3 1/2 x 5	34x3 1/2	34x4	W
Kinsol, Utility	1 1/2	2775	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Olympic, A	2 1/2	3500	4 1/2 x 5 1/2	36x4	36x7	W	Southern, 15	1 1/2	2500	3 1/2 x 5 1/2	36x6 1/2	34x4	W
Kinsol, Freight	2 1/2	3475	4 1/2 x 5 1/2	36x4	36x7	W	Oneida, A-9	1 1/2	2350	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Southern, 20	2	2900	4 1/2 x 5 1/2	36x6 1/2	40x8	W
Kinsol, H. D.	4	4475	4 1/2 x 5 1/2	36x5	36x5d	W	Oneida, B-9	1 1/2	2915	4 x 5 1/2	36x4	36x7	W	Standard, 1-K	1-1 1/2	1950	3 1/2 x 5	34x3 1/2	34x5	W
Kleiber, AA	1	2600	4 1/2 x 5 1/2	34x3 1/2	34x5	W	Oneida, C-9	1 1/2	3390	4 x 5 1/2	36x4	36x7	W	Standard, 76	2 1/2	3100	4 1/2 x 5 1/2	36x4	36x7	W
Kleiber, AB	1 1/2	3100	4 1/2 x 5 1/2	36x3 1/2	36x6	W	Oneida, D-9	3 1/2	4345	4 1/2 x 5 1/2	36x5	36x10	W	Standard, 66	3 1/2	4000	4 1/2 x 5 1/2	36x5	36x10	W
Kleiber, BB	2	3600	4 1/2 x 5 1/2	36x4	36x7	W	Oneida, E-9	5	5460	4 1/2 x 5 1/2	36x6	40x12	W	Standard, 5-K	5-7	5250	4 1/2 x 6	36x6	40x12	W
Kleiber, B	2 1/2	4200	4 1/2 x 5 1/2	36x5	36x8	W	Orleans, A	1 1/2	2750	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Sterling, 1 1/2	1 1/2	3200	4 x 5 1/2	36x3 1/2	36x6	W
Kleiber, C	3 1/2	4900	4 1/2 x 5 1/2	36x5	36x5d	W	Orleans, B	2 1/2	3250	4 1/2 x 5 1/2	36x4	36x7	W	Sterling, 2	2	3500	4 x 5 1/2	36x4	36x6	W
Kleiber, D	5	5600	5 x 6 1/2	36x6	40x12	W	Orleans, C	3 1/2	3750	4 1/2 x 5 1/2	36x4 1/2	36x8	W	Sterling, 2 1/2	2 1/2	3670	4 1/2 x 5 1/2	36x4	36x4 1/2	W
Koehler, D	1 1/2	1885	3 1/2 x 5	34x3 1/2	34x5	W	Orleans, D	5	4250	4 1/2 x 5 1/2	36x6	40x8	W	Sterling, 3 1/2	3 1/2	4650	4 1/2 x 5 1/2	36x5	40x5 1/2	W
Koehler, M	2 1/2	2875	4 x 5 1/2	36x4	36x7	W	Oshkosh, A	2	3750	3 1/2 x 5	36x6 1/2	36x8 1/2	W	Sterling, 5-W	5	5300	5 x 6 1/2	36x6	40x6d	W
Koehler, MCS	3 1/2	2975	4 x 5 1/2	36x4	36x7	W	Oshkosh, AA	2	3850	3 1/2 x 5	36x6 1/2	36x8 1/2	W	Sterling, 5-C	5	6000	5 x 6 1/2	36x6	40x6d	C
Koehler, F	3 1/2	3885	4 1/2 x 5 1/2	36x5	36x10	W	Oshkosh, B	2 1/2	4150	4 x 5 1/2	38x7 1/2	38x7 1/2	W	Sterling, 7 1/2	7 1/2	6500	5 x 6 1/2	36x6	40x7d	C
Koehler, MT, Trac	5	2975	4 x 5 1/2	36x4	36x7	W	Oshkosh, BB	2 1/2	4300	4 x 5 1/2	38x7 1/2	38x7 1/2	W	Stewart, 15	1	1875	3 1/2 x 5	35x5 1/2	35x5 1/2	I
L.M.C., 2-20	2 1/2	2540	4 1/2 x 5 1/2	36x4	36x4d	I	Packard, EC	2 1/2	3500	4 1/2 x 5 1/2	36x4	36x7	W	Stewart, 9	1 1/2	2200	3 1/2 x 5	34x3 1/2	34x5	I
Lange, B	2 1/2	3350	4 1/2 x 5 1/2	36x4	36x6	C	Packard, ED	4	4100	4 1/2 x 5 1/2	36x5	36x5d	W	Stewart, 7	2	2900	4 1/2 x 5 1/2	34x4	34x7	I
Larrabee, XZ	3 1/2	1925	3 1/2 x 4 1/2	34x5 1/2	34x5 1/2	B	Packard, EF	4	4500	5 x 5 1/2	36x6 1/2	40x6d	W	Stewart, 7-X	2 1/2	2950	4 1/2 x 5 1/2	34x4	34x7	I
Larrabee, U	1 1/2	2400	3 1/2 x 4 1/2	34x3 1/2	34x5	W	Packard, EX	4	4000	4 1/2 x 5 1/2	36x6 1/2	40x8	W	Stewart, 10	3 1/2	3850	4 1/2 x 5 1/2	36x5	36x5d	I
Larrabee, SK	2 1/2	3200	4 1/2 x 5 1/2	36x4	36x7	W	Paige, 52-19	1 1/2	2880	4 x 5 1/2	34x3 1/2	34x6	W	Stewart, 10-X	3 1/2	3850	4 1/2 x 6	36x5	36x5d	I
Larrabee, FL	3 1/2	4000	4 1/2 x 5 1/2	36x5	36x5d	W	Paige, 54-20	2 1/2	3400	4 1/2 x 5 1/2	34x4	34x4d	W	Stoughton, A	1	1905	3 1/2 x 5 1/2	34x4 1/2	35x5 1/2	W
Larrabee, FW	5	4800	4 1/2 x 6	36x6	40x6d	W	Paige, 51-18	3 1/2	4235	4 1/2 x 5 1/2	36x5	36x5d	W	Stoughton, B	1 1/2	2350	3 1/2 x 5 1/2	36x3 1/2	36x5	W
Lien, L	1	2350	3 1/2 x 5 1/2	35x5 1/2	35x5 1/2	W	Parker, F29	2	3500	4 x 6	34x4	36x4d	W	Stoughton, D	2	2800	4 x 5 1/2	36x4	36x7	W
Loadingsham, C	1	2100	3 1/2 x 5	35x5 1/2	35x5 1/2	W	Parker, J29	3 1/2	4400	4 1/2 x 6	36x5	40x5d	W	Stoughton F	2	3600	4 1/2 x 5 1/2	36x5 1/2	36x5 1/2	W
Loadingsham, W	1 1/2	2700	3 1/2 x 5 1/2	34x3 1/2	34x5	W	Parker, M29	5	5500	4 1/2 x 6	36x6	40x6d	W	Sullivan, E	2	3350	4 1/2 x 5 1/2	36x4	36x7	W
Loadingsham, W	2-2 1/2	3150	4 1/2 x 5 1/2	36x4	36x7	W	Patriot, Reverse	3 1/2	1795	3 1/2 x 5	35x5 1/2	35x5 1/2	W	Sullivan, H	3 1/2	4650	4 1/2 x 6	36x5	36x5d	W
Maccarr, L	1 1/2	2925	3 1/2 x 5	36x4	36x6	W	Patriot, Lincoln	1 1/2	2450	4 x 5 1/2	34x3 1/2	34x5	W	Superior, D	1	1650	3 1/2 x 5	34x4 1/2	34x4	I
Maccarr, H-2	2 1/2	3650	4 1/2 x 5 1/2	36x5	36x4d	W	Patriot, Washg'n	2 1/2	3450	4 1/2 x 5 1/2	36x4	36x7	W	Superior, E	2	2600	4 1/2 x 5 1/2	36x4	36x6	I
Maccarr, M-2	3 1/2	4500	4 1/2 x 6	36x5	36x5d	W	Piedmont, 4-30	1 1/2	1685	3 1/2 x 5	34x4 1/2	34x4 1/2	W	Super Truck, 50	2 1/2	3300	4 x 6	36x4	36x8	W
Maccarr, G	5	5500	4 1/2 x 6	36x5	40x6d	W	Pierce-Arrow	2	3200	4 x 5 1/2	36x4	36x4d	W	Super Truck, 70	3 1/2	4300	4 1/2 x 6	36x5	40x5d	W
MacDonald, A	7 1/2	5750	5 x 6 1/2	40x7	40x14	I	Pierce-Arrow	3 1/2	4350	4 1/2 x 6 1/2	36x5	36x5d	W	Super Truck, 100	5	5300	4 1/2 x 6	36x5	40x12	W
Mack, AB D.R.	1 1/2	3450	4 x 5	36x4	36x3 1/2	D	Pierce-Arrow	5	4450	4 1/2 x 6 1/2	36x5	40x6d	W	Super Truck, 150	7 1/2	6300	5 x 6	36x6	40x7d	W
Mack, AB	2 1/2	3400	4 x 5	36x4	36x4d	D	Pioneer, 50	1	1550	3 1/2 x 4 1/2	32x4 1/2	32x4 1/2	W	Texas, A38	1 1/2	1095	3 1/2 x 5	33x4	33x4	I
Mack, AB Chain	1 1/2	3000	4 x 5	36x4	36x3 1/2	C	Pittsburgher, C-21	2 1/2	3500	4 1/2 x 5 1/2	36x5	36x7	W	Texas, TK39	1 1/2	1550	3 1/2 x 5	36x6	38x7	W
Mack, AB Chain	2	3300	4 x 5	36x4	36x4d	C	Pony	1 1/2	400	2 1/2 x 4	28x3 1/2	28x3 1/2	C	Tiffin, GW	1 1/2	2400	4 1/2 x 5 1/2	36x3 1/2	36x5	W
Mack, AB D.R.	2	3750	4 x 5	36x4	36x4d	D	Power, F	1 1/2	400	3 1/2 x 5 1/2	36x6	36x6	W	Tiffin, MW	2 1/2	3100	4 1/2 x 5 1/2	36x4	26x3 1/2	W
Mack, AC Chain	3 1/2	4950	5 x 6	36x5	40x5d	C	Power, C	3 1/2	400	4 1/2 x 5 1/2	36x5	40x10	W	Tiffin, PW	3 1/2	400	4 1/2 x 5 1/2	36x5	40x5 1/2	W
Mack, AC Chain	5	5500	5 x 6	36x6	40x6d	C	Premcar, B-143	1 1												

Specifications of Current Motor Truck Models—Continued

NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES Front Rear	Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES Front Rear	Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES Front Rear	Final Drive
Ward-LaF., SA	5	\$5590	5 x 6 1/2	36x6 40x6d	W	Wichita, O	3 1/2	\$4000	4 1/2 x 6	36x5 36x5d	W	Winther, 430	1 1/2	\$2850	3 1/2 x 5	32x4 32x4	F
Watson, E	1	1865	3 1/2 x 5 1/2	35x5 35x5f	W	Wichita, S	5	5000	4 1/2 x 6	36x6 40x6d	W	Winther, 39	1 1/2	2450	3 1/2 x 5	34x3 1/2 34x5	F
Watson, N	3 1/2	4250	4 1/2 x 5 1/2	36x5 36x10	W	Wilcox, AA	1	2100	3 1/2 x 5 1/2	36x4 36x4	W	Winther, 49	2	3250	4 x 5	34x4 34x4d	F
Western, W1 1/2	1 1/2	2550	4 1/2 x 5 1/2	36x3 1/2 36x5	W	Wilcox, B	1 1/2	2775	4 1/2 x 5	36x4 36x5	W	Winther, 70	3 1/2	4200	4 x 5	36x5 36x5d	F
Western, L1 1/2	1 1/2	2550	4 1/2 x 5 1/2	36x3 1/2 36x5	W	Wilcox, D	2 1/2	3300	4 1/2 x 5	36x4 36x5	W	Winther, 450	4	3600	4 x 5	34x5 36x6	F
Western, W2 1/2	2 1/2	3250	4 1/2 x 5 1/2	36x4 36x7	W	Wilcox, E	3 1/2	4250	4 1/2 x 6	36x5 36x5d	W	Winther, 109	5	5250	4 1/2 x 6	36x6 40x5d	F
Western, L2 1/2	2 1/2	3250	4 1/2 x 5 1/2	36x4 36x7	W	Wilcox, F	5	5200	4 1/2 x 6 1/2	36x5 40x6d	W	Winther, 140	7	5900	5 x 6	36x6 40x7d	F
Western, W3 1/2	3 1/2	4250	4 1/2 x 6	36x5 40x5d	W	Wilson, F	1 1/2	2270	3 1/2 x 5	36x3 1/2 36x5	W	Wisconsin B	1	1950	4 x 5 1/2	34x5 34x5f	W
White, 15	3 1/2	2400	3 1/2 x 5 1/2	34x5 34x5f	B	Wilson, EA	2 1/2	2825	4 1/2 x 5 1/2	36x4 36x7	W	Wisconsin C	1 1/2	2300	4 1/2 x 5 1/2	36x5 36x5f	W
White, 20	2	3250	3 1/2 x 5 1/2	36x4 36x7	D	Wilson, G	3 1/2	3685	4 1/2 x 5 1/2	36x5 36x5d	W	Wisconsin D	2 1/2	3500	4 1/2 x 5 1/2	36x6 36x10	W
White, 40	3 1/2	4200	3 1/2 x 5 1/2	36x5 40x5d	D	Wilson, H	5	4520	4 1/2 x 6	36x6 40x6d	W	Wisconsin E	3 1/2	4000	5 x 6 1/2	36x6 36x12 1/2	W
White, 45	5	4500	4 1/2 x 5 1/2	36x6 40x6d	D	Winther, 751	3 1/2	1795	3 1/2 x 5	34x4 1/2 35x5f	I	Witt-Will, N	1 1/2	2750	3 1/2 x 5	36x3 1/2 36x5	W
White Hick., E	1 1/2	2450	3 1/2 x 5	34x5 34x5f	W	*2-cyl. 16-cyl. 18-cyl. All others, not marked, are 4-cyl. Tractor. Tractor. *Canadian made. Final Drive: W—Worm, I—Internal Gear, C—Chain, D—Double Reduction, B—Bevel, 4—Four-Wheel, E—External Gear. *Tires—optional. †Pneumatic Tires. All others solid. ††—Price includes body. \$—Price includes several items of equipment.											
White Hick., H	1 1/2	2750	3 1/2 x 5	36x3 1/2 36x5	W							Wolverine, J	1 1/2	2125	3 1/2 x 5	34x3 34x4	F
White Hick., K	2 1/2	3350	4 1/2 x 5 1/2	36x4 36x5	W							Wolverine, J	1 1/2	2375	3 1/2 x 5	34x3 34x5	F
Wichita, K	1 1/2	2300	3 1/2 x 5 1/2	36x3 1/2 36x5	W							Wolverine, J	2	2640	3 1/2 x 5	34x4 34x7	F
Wichita, L	1 1/2	2600	3 1/2 x 5 1/2	36x3 1/2 36x5	W							Wolverine, J	2 1/2	3125	4 1/2 x 5 1/2	36x5 36x10	F
Wichita, M	2	2800	3 1/2 x 5 1/2	36x3 1/2 36x6	W							Wolverine, L	3 1/2	4100	4 1/2 x 5 1/2	36x5 36x10	F
Wichita, R	2 1/2	3000	3 1/2 x 5 1/2	36x4 36x7	W							Yellow Cab M21	3 1/2	2050	3 1/2 x 5	32x4 32x4	B
Wichita, RX	2 1/2	3600	4 1/2 x 6	36x4 36x8	W							Yellow Cab M41	1 1/2	2350	3 1/2 x 5	34x4 1/2 34x4 1/2	W

Farm Tractor Specifications and Prices

TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Pump Capacity	TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Pump Capacity	TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Pump Capacity	
All-In One	16-30	\$1975	3	Clim.	4-5 x 6 1/2	GDK	3-4	Gray, 1920	18-36	\$2000	3	Wauk	4-4 1/2 x 6 1/2	Gas.	4	Port Huron, A	12-25	\$1700	4	Chief	4-4 1/2 x 6	G.K.	3	
Allis-Chalm. B	6-12	925	2	LeR.	4-3 1/2 x 4 1/2	Gas.	1-2	Ground Hog	19-31	2000	4	Erd.	4-4 x 6	GorK	3	Post	12-20	1800	4	Wauk	4-4 1/2 x 5 1/2	GorK	3	
Allis-Chalm. G.P.	6-12	850	2	LeR.	4-3 1/2 x 4 1/2	Gas.	2-3	Gt. Western St.	20-30	1950	4	Beav.	4-4 1/2 x 6	K.	4	Prairie Dog, L	9-18	650	3	Wauk	4-3 1/2 x 5 1/2	Gas.	3	
Allis-Chalm.	12-20	1495	2	Mid. W	4-4 x 5 1/2	Gas.	2-3	Hart-Parr, 20	20	905	4	Own	2-5 1/2 x 6 1/2	K.D.	3	Prairie Dog, D	15-30	1250	4	Wauk	4-4 1/2 x 6 1/2	Gas.	3	
Allis-Chalm.	18-30	2150	4	Own	4-4 1/2 x 6 1/2	G.K.	3-4	Hart-Parr, 30	30	1595	4	Own	2-6 1/2 x 7 1/2	K.D.	3	Ranger Cal.	8-16		4	LeR.	4-3 1/2 x 4 1/2	Gas.	1	
Allis-Chalm.	10-18	875	4	Own	4-4 1/2 x 6 1/2	G.K.	4	Heider, C	9-16	1170	4	Wauk	4-4 1/2 x 5 1/2	G.K.	2	Reed, T-20	15-30	2750	4	Dom	4-4 1/2 x 6	K.	3-4	
Allwork, 2-C	14-28	1875	4	Own	4-4 1/2 x 6 1/2	GorK	3	Heider, D	12-20	1395	4	Wauk	4-4 1/2 x 6 1/2	G.K.	3	Reed, A-1	18-36	2400	4	Dom	4-5 x 6	Gas.	4	
Andrews, K.D.	18-36	2500	4	Clim.	4-5 x 6 1/2	GorK	4	Heider, Cal	6-10	1050	4	LeR.	4-3 1/2 x 4 1/2	Gas.	1	Reliable	10-20	985	4	Own	2-6 x 7	Ker.	2	
Appleton	12-20	1500	4	Buda	4-4 1/2 x 5 1/2	G.K.	2-3	Hicks	20-30		4	LeR.	4-4 1/2 x 6	GorK	3	Reliable	12-25	1800	4	Wauk	4-4 1/2 x 5 1/2	GorK	3	
Are, 1921	3-5	550	4	Own	1-4 1/2 x 5 1/2	G.K.	1	Huber Light 4	12-25	1185	4	Wauk	4-4 1/2 x 5 1/2	GorK	3	Russell	12-24	1500	4	Own	4-4 1/2 x 5 1/2	GorK	2-3	
Autman-T	15-30	2200	4	Clim.	4-5 x 6 1/2	G.K.	4	Huber Super 4	15-30	1885	4	Midw.	4-4 1/2 x 6	Gas.	3	Russell	15-30	3200	4	Own	4-5 x 6 1/2	GorK	3-4	
Autman-T	22-45	3850	4	Own	4-6 1/2 x 8	G.K.	6									Russell	20-35	3000	4	Own	4-5 1/2 x 7	GorK	4-5	
Autman-T	30-60	5000	4	Own	4-7 x 9	G.K.D.	8									Russell	30-60	5000	4	Own	4-8 x 10	GorK	8-10	
Automot. B-3	12-24	1785	4	Horc.	4-4 x 5 1/2	G.K.	2-3	Illinois Super	18-36	2500	4	Clim.	4-5 x 6 1/2	G.K.	4	Samsen, B.M.		795	4	Nov.	4-4 x 5 1/2	G.K.	2	
Avery, SR, Cal.	5-10		4	Own	4-3 x 4	G.K.	2	Imperial, C	40-70	5000	4	Own	4-7 1/2 x 9	G.K.D.	10	Samsen, J	10-20	1250	4	Own	4-4 1/2 x 5 1/2	G.K.D.	2	
Avery, Cal-C	5-10		4	Own	4-3 x 4	G.K.	2	Indians, F	5-10		2	LeR.	4-3 1/2 x 4 1/2	Gas.	1-2	Samsen, J	15-35	1750	4	Own	4-5 x 6 1/2	G.K.D.	2	
Avery, B	5-10		4	Own	4-3 x 4	G.K.	2	International	8-16	900	4	Own	4-4 1/2 x 5	G.K.D.	2	Samsen, J	6-12		2	LeR.	4-3 1/2 x 4 1/2	Gas.	10	
Avery, C	5-10		4	Own	4-3 x 4	G.K.	2	International	15-30	1750	4	Own	4-5 1/2 x 8	G.K.D.	4	Samsen, J	9-18		2	Gray	4-3 1/2 x 5	G.K.	10	
Avery	8-16		4	Own	2-5 1/2 x 6	G.K.D.	2-3	J-T	20-40	3485	*2	Chief	4-4 1/2 x 6	G.K.D.	3-4	Shelby, D	15-30		4	Beav.	4-4 1/2 x 6	G.K.	3	
Avery	12-20		4	Own	4-4 1/2 x 6	G.K.D.	2-3	Klumb, F	16-32	1650	4	Clim.	4-5 x 6 1/2	G.K.	3-4	Shelby, C	10-20		4	Erd.	4-4 x 6	GorK	2-3	
Avery	12-25		4	Own	2-6 1/2 x 7	G.K.D.	2-3	Kmdeon, 1920	25-45	2500	4	Own	4-5 x 9	Gas.	4-6	Shelby, C	10-20		4	Beav.	4-4 1/2 x 6	G.K.	3	
Avery	14-28		4	Own	4-4 1/2 x 7	G.K.D.	3-4									Short Turn, A	20-40	1500	3	Beav.	4-4 1/2 x 6	G.K.	3	
Avery	18-36		4	Own	4-5 1/2 x 6	G.K.D.	4-5	LaCrosse, M	6-12	900	4	Own	2-4 x 6	G.K.	1	Square T, A	15-35	2075	3	Clim.	4-5 x 6 1/2	K.G.	3	
Avery	25-50		4	Own	4-6 1/2 x 7	G.H.D.	5-6	LaCrosse, G	12-24	1250	4	Own	2-6 x 7	GorK	3	Square T, A	12-24	1485	3	Clim.	4-4 x 5	Gas.	3	
Avery	45-65		4	Own	4-7 1/2 x 8	G.K.D.	5-10	Lansan	12-25	1495	4	Midw.	4-4 1/2 x 5 1/2	Gas.	3	Stinson, 4E	18-36	1535	4	Beav.	4-4 1/2 x 6	G.K.	4	
Bates	15-25		4	Own	4-4 1/2 x 6	Ker.	3	Lansan	15-25	1685	4	Beav.	4-4 1/2 x 6	GorK	3-4	Stinson	20-40	2250	4	Beav.	4-4 1/2 x 6	G.K.	4	
Bates Mule, H	15-25		4	Midw.	4-4 1/2 x 5 1/2	Gas.	3	Lansan	21	1530	1985	4	Beav.	4-4 1/2 x 6	GorK	3-4	Tiege	15-27	2625	4	Wisc.	4-4 1/2 x 6	Gas.	3-4
Bates Mule, F	18-25		4	Midw.	4-4 1/2 x 5 1/2	Gas.	3	Leader, B	12-18	1095	4	Own	2-6 x 6 1/2	G.K.D.	2-3	Tiege	10-20	900	4	Own	2-6 1/2 x 8	G.K.D.	3-4	
Bates Mule, G	25-35		4	Midw.	4-4 1/2 x 6	Gas.	com.	Leader, N	16-32	1985	4	Clim.	4-5 x 6 1/2	G.K.	3-4	Tiege	30-45	3200	4	Wauk	4-4 1/2 x 6 1/2	Gas.	2	
Bean	8-16		1	Own	4-3 1/2 x 4	G.K.	2-3	Leader, GU	18-35	2775	*2	Clim.	4-5 1/2 x 6 1/2	G.K.	3-4	Tiege	6-10		3	LeR.	4-3 1/2 x 4 1/2	Gas.	3-4	
Beeman, G	2-4	315	4	Own	1-3 1/2 x 4 1/2	G.K.	1 1/2	Leonard, E	20-30	2530	4	Buda	4-4 1/2 x 6	G.K.	3	Tiege	10-20	1200	2	Own	4-6 1/2 x 7	Ker.	2-3	
Best	30		4	Own	4-4 1/2 x 6 1/2	G.K.D.	3-4	Liberty, A	18-32	2475	4	Clim.	4-5 x 6 1/2	G.K.	3	Tiege	15-30	1800	2	Own	4-7 x 8	Ker.	3-4	
Best	60		4	Own	4-6 1/2 x 7	G.K.D.	3-4	Linn, H4J	40	4500		Cont.	4-4 1/2 x 5 1/2	Gas.	4	Tiege	25-50	3000	2	Own	4-8 1/2 x 10	Ker.	4-5	
Boring, 1921	1850		3	Wauk	4-4 1/2 x 5 1/2	GorK	3-4	Linn, W	60	5100		* Wauk	4-5 x 6 1/2	Gas.	6	Tiege	40-50		4	Own	8-3 1/2 x 5	Gas.	4-5	
Burns, 1921	15-30	1650	4	Own	2-6 1/2 x 7	Ker.	3-4	Little Giant, B	16-22	2200	4	Own	4-4 1/2 x 5	K.	4	Traction Motor	40-50		4	Own	8-3 1/2 x 5	Gas.	4-5	
Capital	15-30	1000	2	Own	4-4 1/2 x 6	Gas.	3	Little Giant, A	26-35	3300	4	Own	4-5 1/2 x 6	K.	6	Triumph, TB	6-12	715	4	LeR.	4-3 1/2 x 4 1/2	Gas.	1-2	
Case	10-18	1090	4	Own	4-3 1/2 x 5	GorK	2	Lombard	85-150		*2	Own	4-5 1/2 x 6	G.K.	16	Triumph, TB	18-36	2450	2	Erdr.	4-4 1/2 x 6	Ker.	4	
Case	15-27	1680	4	Own	4-4 1/2 x 6	GorK	3	Lombard	50		*2	Own	4-4 1/2 x 6 1/2	Gas.	6-10	Triumph, TB	25-40	3750	2	Wauk	4-5 x 6 1/2	GorK	4	
Case	22-40	3100	4	Own	4-5 1/2 x 6 1/2	GorK	4-5	Magnet, B	14-28	1875	4	Wauk	4-4 1/2 x 6 1/2	K&G	3	Turner, 1921	12-25	1205	4	Buda	4-4 1/2 x 5 1/2	G.K.	3	
Caterpillar T11	25		4	Own	4-4 1/2 x 6	Gas.	4	Master Jr	5-10	585		LeR.	4-2 1/2 x 4	Gas.	1	Turner	24-40	3750	2	Wauk	4-5 x 6 1/2	GorK	4	
Caterpillar T16	40		4	Own	4-6 1/2 x 7	Gas.	4-5	Merry Gar1921	2	230	2	Erdr.	1-2 1/2 x 2 1/2	Gas.	1	Twin City	12-20	1580	4	Own	4-4 1/2 x 6	G.K.	3	
Centaur	6-2 1/2	455	2	NWay	2-4 1/2 x 4 1/2	GorK	1-9	Minne, All-P	12-25	1200	4	Own	4-4 1/2 x 7	GorK	3	Twin City	20-35	3175	4	Own	4-5 1/2 x 6 1/2	G.K.	5	
Chase	12-25	2100	3	Buda	4-4 1/2 x 5 1/2	GorK	2-3	Minne, Gen.P	17-30	1850	4	Own	4-4 1/2 x 7	GorK	3-4	Twin City	40-65	5250	4	Own	4-7 1/2 x 9	G.K.	5	
Chicago	40	2500	4	Own	4-4 1/2 x 6	Gas.	4	Minne.				Own	4-6 x 7	GorK	5-6	Uncle Sam C20	12-20	1385	4	Weid.	4-4 x 5 1/2	G	2-3	
Citrac.	12-20	1495	2	Own	4-4 x 5 1/2	G.K.D.	2-3	Med. Duty	22-44	3300	4	Own	4-6 x 7	GorK	5-6	Uncle Sam B19	20-30	2300	4	Beav.	4-4 1/2 x 6	GorK	3-4	
Dart	15-30	1700	3	Dom.	4-4 1/2 x 6	Gas.	3-4	Minne.				Own	4-6 x 7	GorK	5-6	Uncle Sam D21	20-30	1985	4	Beav.	4-4 1/2 x 6	GorK	3-4	
Dart, B.J.	15-30	2150	4	Buda	4-4 1/2 x 6	Gas.	3-4	Heavy Duty	35-70	4600	4	Own	4-7 1/2 x 9	GorK	8-9	Universal	1-4	475	2	Own	1-3 1/2 x 5	G	1	
Deppe, A	20-30	2500	4	Buda	4-4 1/2 x 6	Gas.	4	Mohawk 1921	8-16	785	4	Light	4-3 1/2 x 4 1/2	GorK	1-2	Utilitor, 501	2 1/2	380	4	Own	1-3 1/2 x 2 1/2	G	5-6	
Dill	20	2480	4	Cont.	4-4 1/2 x 5 1/2	Gas.	3	Melroe Univ D	9-18	990	2	Own	4-3 1/2 x 5	Gas.	2-3	Wallis, Biltwell	12-24	1750	4	Own	4-4 1/2 x 5 1/2	G.K.D.	2	
Dill, R.W.	20	2980	4	Midw.	4-4 1/2 x 5	Gas.	3	Melroe Orch.	9-18	1075	2	Own	4-3 1/2 x 5	Gas.	2-3	Vetico, 1921	9-18	1350	4	Gray	4-4 1/2 x 5 1/2	G.K.	3	
Do-it-All	-7	595		Own	1-4 1/2 x 5	Gas.	3	Motor Macult.	1 1/2	195	2	Own	1-2 1/2 x 2 1/2	Gas.	1	Victory, 1921	15-30	1750	4	Wauk	4-4 1/2 x 5 1/2	G.K.	3	
Eagle	12-22	1390	4	Own	2-7 x 8	GorK	3-4	Motor	15-30	2250	4	Buda	4-4 1/2 x 6	Gas.	3-4	Vim, 1921	15-30	1650	4	Wauk	4-4 1/2 x 5 1/2	G.K.	3	
Eagle, F	16-30	1450	4	Own	2-8 x 8	GorK	4-5	NB	3-6	425	4	Own	2-3 1/2 x 4	Gas.	2	Wallis, K	15-25	1600	4	Own	4-4 1/2 x 5 1/2	G.K.	3	
E-B, AA	12-20	1485	4	Own	4-4 1/2 x 5	GorK	3	NB	3-6	425	4	Own	2-2 1/2 x 4	Gas.	2	Waterloo	12-25		4	Own	2-6 1/2 x 7	G.K.	3	
E-B, Q	12-20	925	4	Own	4-4 1/2 x 5	GorK	3	Nichols-Shop	20-42	3100	4	Own	8 x 10	GorK	3-6	Webfoot, 53	28-63	5250	*2	Wisc.	4-5 1/2 x 7	G.D.	6	
E-B	16	3200	4	Own	4-5 1/2 x 7	GorK	4	Nichols-Shop	20-42	3100	4	Own	8 x 10	GorK	3-6	Wellington, B	12-22	900	4	Erd.	4-4 x 6	Ker.	2-3	
Evans	18-30	2000	4	Buda	4-4 1/2 x 6	G.K.	3	Nichols-Shop	25-50	3480	4	Own	9 x 12	GorK	4-7	Wellington, F	16-30	1400	4	Chief	4-4 1/2 x 6	Ker.	3-4	
Fageol, D	9-12	1525	4	Lyc.	4-3 1/2 x 5	Gas.	2	Nichols-Shop	25-50	3480	4	Own	9 x 12	GorK	4-7	Western, 1920	16-32	2100	4	Clim.	4-5 1/2 x 6	G.K.	4	
Farm Horse, B	18-30	1885	4	Clim.	4-5 x 6 1/2	G.K.	3-4	Nilson Jr.	15-25	1775	4	Wauk	4-4 1/2 x 5 1/2	GorK	3-4	Wetmore	12-25	1650	4	Wauk	4-4 x 5 1/2	Gas.	3	
Farquhar	15-25		4	Buda	4-4 1/2 x 6	G.K.D.	3-4	Nilson Senior	20-40	2475	5	Wauk	4-5 x 6 1/2	G.K.	4	Wharton, E	12-20	1800	3	Buda	4-4 1/2 x 5 1/2	Gas.	2	
Farquhar	18-																							

MOTOR WORLD

for
DEALERS, JOBBERS AND GARAGEMEN

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No. 9

Let's Push It This Fall!



*Is Your Town Going
to Hold an*

ENCLOSED CAR WEEK

THIS FALL?

**This Story Tells How to Promote and Conduct It—Several
Dealer Associations Found That It Stimulated Business
Last Year**

IS your town going to hold an enclosed car week this fall?

There are indications that dealers in a number of communities will get together in a co-operative effort to advance and strengthen the opening of the fall buying season and the sale of all types of automobiles by intensified promotion of the industry's finest product—the enclosed car.

In the best automobile year sales are slow in getting under way in the fall. They will be slow this year and this year, above recent years, the industry needs to take advantage of every opportunity to arouse public interest in its products. Some cities have fall automobile shows at the State and county fairs—and they stimulate fall sales. Others have enclosed car shows. A few in previous years have tried the Enclosed Car Week idea, with individual salesrooms making special displays of enclosed cars and with the idea both individually and co-operatively advertised.

Such a feature, vigorously conducted and supported by dealers of any community would—

- 1—Advance the opening of the fall buying season.
- 2—Give the fall buying season a stronger start.
- 3—Educate the public on the enclosed car.

FOR the sake of something definite to talk about, suppose the week of Oct. 8-15 was chosen. The Enclosed Car Week observation, with all its publicity, would help put an end to the after-summer sluggishness of public interest in the automobile.

It would get more people thinking earlier in the fall about automobiles.

It would advance by several weeks the sale of some enclosed cars.

It would get many new enclosed cars on the highways in October instead of November, creating public interest and thought and giving dealers just so many more weeks to promote the enclosed car as a super-car for fall and winter and as the all-season car.

In so presenting the enclosed car the dealers of any community would be presenting the truth with entire sincerity, yet they would be doing themselves as well as the public a service.

The enclosed car is the best car for the manufac-

turer to make and the dealer to sell because—

1—There is a larger profit per unit of manufacture or sale than on the open car.

2—There is an opportunity for an earlier repeat order. The enclosed car is used more days and

so more miles in a year than the open car and will wear out faster.

3—There is opportunity for larger sales per unit of supplies and equipment—the enclosed car uses more oil, gas, tires, etc., than an open car because it is heavier, and because in the hands of an average owner it will have greater mileage per year.

The item of profit is strikingly important to the manufacturer, dealer and salesman.

TAKE the dealer's case. His gross profit on an enclosed car is something like \$200 above that on an open car on the average. Thirty cars taken

Pass on the Good Word

IS your town going to have an Enclosed Car Week this fall?

When is it going to be held and who is going to conduct it—your dealer association or an unincorporated group of dealers.

Will you send a few lines of information about the plans to Motor World?

The object is to enable the editors to spread the story of Enclosed Car Week throughout the country, so that dealers in as many communities as possible may profit by this form of autumn sales stimulation.

from the Motor World Guide, ranging from low to high prices, have average of \$2,224 on the five-passenger touring car and \$3,228 on the sedan. The difference is \$1,064. Taking 20 per cent as an average dealer's commission, the sale of the sedan is worth \$212.80 more to the dealer in gross profit than the sale of a touring car, and the salesman working on a 5 per cent commission gets \$53.20 more for selling the sedan than the touring car, and often it isn't any more work.

EVERYBODY won't buy an enclosed car. But more people will buy this class of vehicle than have been buying them if the enclosed car is more aggressively and intelligently sold. *And every open car prospect converted into an enclosed car purchaser means \$212 more to the dealer, and \$53 more for the salesman on the basis of the calculation made.*

Isn't it worth while?

And if it is worth while, how are dealers going to plan and conduct an Enclosed Car Week?

Here are some suggestions:

1—Get the dealers of your community to get together at a lunch or other sort of meeting and explain the idea of the Enclosed Car Week and its possibilities.

2—If the holding of a week is approved, decide on an appropriation for the co-operative work, including advertising and other forms of promotion. An assessment of at least \$50 a dealer probably will be necessary. In some cities where a week has been held with considerable success the cost ranged about \$100 per dealer. In some cases this was handled by assessing the participating dealers \$50 each and taking the balance from the dealer association treasury. In other cases the assessment per dealer was larger and a smaller amount was taken from the treasury. As an instance, in Brooklyn, N. Y., where 26 dealers co-operated last year in an Enclosed Car Week, the total cost of promotion was \$2,600, half of which was taken from the treasury, while the dealers shared the other half.

3. Fix the date for the observance, preferably beginning and ending on Saturday.

4—Decide on the forms of promotion. Here are some which might be applied:

(a) Co-operative advertising with the names of participating dealers and the cars they sell on ads large enough to allow this much detail. Advertising can include newspaper space, car cards, window cards, both for dealer establishments and for stores generally which will use them, etc. There should also be a

committee of dealers to get the news story of the week properly before the editorial departments of the newspapers.

(b) A parade can be held of the latest models of enclosed cars of the participating dealers, this parade headed by a band proceeding through the principal streets on the afternoon of the opening Saturday.

(c) One interesting form of promotion is a general price list of all the models of enclosed cars shown by each dealer. The cost of printing can be financed by a charge to dealers or copies of the cards distributed.

(d) Free transportation between different salesrooms for people not owning cars or not using them during Enclosed Car Week.

5—Convince each dealer participating in the week that it will be to his advantage to go to some expense and considerable effort to make an effective display in his own salesroom of his line or lines of enclosed cars. There is opportunity for all kinds of variety in these individual salesroom displays.

6—There is opportunity also for individual advertising of the enclosed car idea in addition to that co-operatively handled by the dealer association.

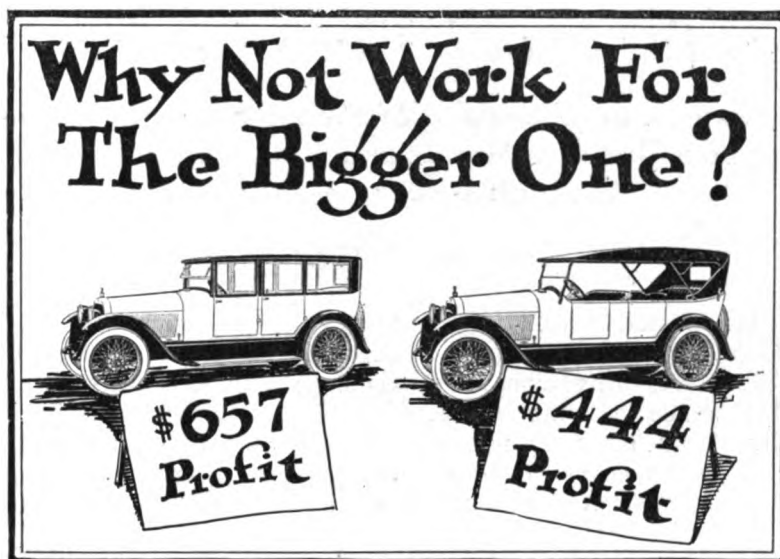
Groups of dealers or dealer associations intending to do anything with the enclosed car idea should get under way immediately in order to assure proper completion of plans in time for the necessary promotional work. It will probably be found advisable in almost all cases to begin the co-operative advertising at least two weeks ahead of the opening day of the week. It may also be found possible in some cities to induce the newspapers to publish special enclosed car week editions with appropriate and interesting news matter supplementing the co-operative copy and the individual copy of participating dealers.

IN view of the fact that enclosed cars, which are the *best buy* for the owner and the *best sell* for the dealer and the only car which can be sold and used the year around now comprise only 17 per cent of total passenger car production of the country, it would seem that there is unusual opportunity for dealers, with some assistance from manufacturers, to arouse public interest and build business on the basis of an Enclosed Car Week.

Would an enclosed car week in your community put into fall sales some of the ginger that shows put into spring sales?

Would it not be the means of directing the attention of purchasers again toward enclosed cars?

What do you think? And what are you going to do?



Reprinted from Motor World of June 8



EXIT—Old Man Pessimism

A Story for Small Town Dealers—And,

**A Remarkable Example of What Can Be Done to
Strengthen Business Morale and Build Public Confidence
Through Dealer Co-operation**

By **ROY ALDEN**

IN all communities in the United States today, the small town motor car dealers and the automotive trades in general have an excellent opportunity to stimulate business. With a limited population to appeal to that is naturally responsive to ingenious merchandising efforts, especially in rural sections, the small town dealer has a splendid chance to swing into action and move his goods if he will but get together with his competitors and the other merchants of the town and launch a campaign of reinvigoration. Many a small town in the country today is dead *because the motor car dealer, the garage man, the grocer, the drug store man and the dry goods man have not gotten together, diagnosed their ailments and FOUND THE REMEDY.*

IN the State of Washington, some thirty miles from Seattle, there is a small town with a population of less than 4,000, known as Snohomish, whose experience during the last year affords a striking example of what can be accomplished by co-operative effort along well-directed lines.

About a year ago crepe surely was in evidence throughout the width and breadth of the business section of Snohomish. The impression gained by the visitor upon his entrance into Snohomish was that the town had but a short time to live. All the merchants agreed that everything was going to the "bow-wows." The farmers from the countryside were all in the "dumps." The prices for their crops had taken a radical descent and they were about as cheerful as a patient in a dentist's chair. Old Man Pessimism surely had taken a firm grip on the town of Snohomish.

As things went from bad to worse, some of the Snohomish merchants decided that something had to be done. The petty jealousies

usually found among competing merchants in a small town were called before the bar and ordered to evaporate. Harley Trowbridge, president of the Trowbridge Farm Supply Co., who sells tractors and farming equipment generally, held council with J. E. Hall, of the Hall Tractor & Auto Co., and Frank C. Webber, of the Snohomish Auto Co.; E. A. Eagle, of The Eagle Co., who sells dry goods, etc.; Giles Cook, of Bruhn & Henry, dispenser of groceries; Steve Gilbertson, of the Snohomish Drug Co.; Irving McCready, of the Kit Kat Candy Shop; Mamie S. Angell, the town milliner, and representatives of other lines of business in the city also began to stir about and hold informal conferences.

The Birth of the Association

It wasn't many weeks before the merchants had agreed that *the only difficulties were those on the surface.* The core was believed to be perfectly sound.

One day notices went out to every merchant in town to gather at luncheon at Irving McCready's candy shop. Virtually every merchant in town responded. At this meeting several of the leading merchants who had tasted of

the bitter dregs of pessimism and discovered that it had no place in their lives made ringing addresses in which they urged that the business interests of the town get together and wage a determined fight to dissipate the gloom that had descended over them. It was a case of either whole-hearted co-operation, they said, or a slow demise for the town.

While the meeting was only scheduled to last during the noon hour, it did not adjourn until late in the afternoon. *Before adjournment the Snohomish Ad Club, with virtually every merchant in town a member, had been born.* The dry goods man on upper First Street forgot his fancied differences with his competitor a few doors down. The confectionery man next to the post-office cast aside his jealousy for his competitor across the street. And so, all up and down the main business section, harmony and co-operation existed.

One of the first plans of the Snohomish Ad Club was to get the farmers and ranchers in the surrounding countryside in the habit of coming to Snohomish to do their shopping, instead of going to the larger cities—Everett, 10 miles away, and Seattle, 30 miles away. Following success gained in extending the rural postal rates, the improvement of roads and highways and other incidental matters, the Snohomish Ad Club decided upon a co-operative bargain day sale. The farm supply man would post a special price on hoes. The automobile

accessory man would make a radical reduction on spotlights and inner tubes. The garage man would announce a special price on a tire retreading job. The grocer would offer coffee or butter or cheese or some other item in his stock at a marked reduction. The dry goods man would probably cut the price on flannel to the bone, and the drug store man would make the price of cold cream, face powder, or dandruff cure very appealing. Every merchant in town would join in the bargain day sales. Through the offices of the secretary of the Ad Club it was arranged that no two merchants would feature the same article.

Part of the co-operative bargain day sales campaign was a two-page advertising spread run in the weekly Snohomish newspaper, which is published on the day preceding the sales. This edition of the paper would be distributed to every resident in town and every farmer living within a radius of about eight or ten miles from the town. The results of the first monthly bargain day sales were beyond expectations. *Already Old Man Pessimism was planning retreat.*

A Banquet for the Farmer

The merchants did not stop with their bargain day sales, however. They decided that to complete their plan of rejuvenation they had to spring some new appeal at regular intervals. A few weeks after the first bargain day sales the merchants dug down in their jeans and gathered together sufficient money to pay for a banquet for the farmers living within the Snohomish trading territory. On the night of the banquet, farmers came from all directions. Dr. W. J. Hindley of Spokane, "official optimist" of the Washington State Retailers' Association, was the principal speaker of the evening. He made an address on the deadly influences of pessimism that made the farmers prick up their ears. He pictured the confirmed pessimist as the greatest obstacle in the way to the return of prosperous times when the farmer will obtain profitable prices for his crops and the merchant will enjoy a healthy turnover.

When the farmers returned to their homes that night, some in their own cars and others in cars driven by the town merchants, they had undoubtedly gathered a different viewpoint.

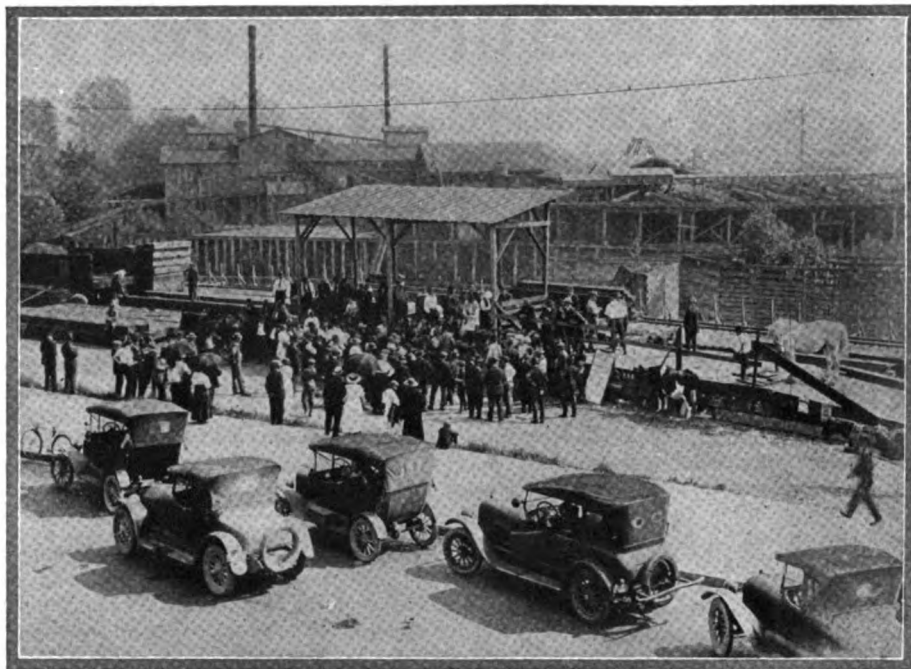
The program of rejuvenation of the Snohomish Ad Club was progressing with excellent results, but still there was the demand for more new ideas to unloosen on the community. A few meetings more were held which developed some plausible suggestions of more or less minor importance, and then there came into being the idea that has made Snohomish set a pace for the small towns of the West. The Big Idea called for a monthly co-operative auction, strictly non-commercial.

Every month the Snohomish Ad Club sends a representative to every store in town and makes a purchase. At the accessory shop he may purchase an inner tube, a box of spark plugs, or a searchlight. At the garage he may purchase a tire. At the dry goods store a bolt of gingham; at the shoe store, a pair

of shoes; at the farm implement store, a half dozen rakes or hoes; at the butcher shop, a slab of bacon; at the grocery store, a half crate of canned salmon, and so on down the line. For each purchase he would pay the merchant the wholesale price, and obtain credit for his purchase.

ticular article offered by one merchant brings more than the wholesale price, he does not receive any more than the wholesale price. Similarly, if the article brings less, he still receives the wholesale price. If there is a surplus it goes into the treasury of the Ad Club. If there is a deficit it is met from the

Old Man Pessimism Is NOT in This Picture



He left town some time before the dealers of Snohomish, Wash., got together in co-operative merchandising effort that rejuvenated business and banished "crape-hanging." This shows the crowds gathering for a town auction. There are some mighty fine ideas for the small town dealers in the story of how the Snohomish dealers did it.

All of the goods he bought would be assembled at the "auction block." In addition to this stock, the farmers would bring in pigs, chickens, cows, farming equipment, milk cans, tools, old furniture or anything and everything that they wanted to dispose of. Promptly at 1:30—on the afternoon of the second Saturday of every month—one of the town merchants selected for the day as the auctioneer would take the stand and commence auctioning off the goods to the highest bidder. First a pig would probably bid for attention; then a tire, a sack of flour, some automobile polish, a cow, a suitcase, a two-gallon can of oil, a box of fancy chocolates, a work horse, an antiquated farm wagon, a case of soap, and so on almost endlessly. In front of the auctioneer are gathered hundreds of people from all over the countryside, who enter quickly into the spirit of competitive bidding. Through all the bidding strict auction rules prevail. The highest bidder takes. For three or more hours the auction continues, until every article put up by the merchants through the Snohomish Ad Club and every article or animal brought in by the farmers is disposed of.

Following the close of the auction, the merchants are paid for goods purchased from them by the Snohomish Ad Club at the wholesale price. Even if a par-

Ad Club treasury, which is subscribed to by the town merchants.

The civic auction sale, combined with the bargain day sales, has proven one of the greatest merchandising events ever conceived by any small town in the West. It has caused the farmers around Snohomish to think of that town when they have shopping to do. It has brought the consumer and the merchant closer together. It has created a healthier atmosphere in the entire community.

And Now Everybody Is Selling

The motor car dealers, the accessory dealers, the garage men, the grocers, the drug store proprietors, the dry goods merchant—every single retailer in town—to-day is enjoying good business. The average turnover of stocks in Snohomish was doubled and then trebled. Bank deposits show substantial increases. Needed improvements are being undertaken.

And the Snohomish Ad Club continues to plan something new for to-morrow—its program of rejuvenation is not yet complete.

The automotive trades in other small towns in the United States may well give some thought to what has been accomplished in Snohomish, once ready for the grave, now as sturdy and healthy as any town in the country.

GOING! GOING! GONE!!

Shall We Put Used Cars Under the Auctioneer's Hammer?

This Story Contains an Interesting Angle of the Question of How to Best Meet the Used Car Situation—Is This San Francisco Dealer Right After All?

IS the auctioneer coming into the automobile business?

That is one of the questions the dealers of the Pacific Coast are beginning to ask. Despite efforts made by the various trade associations and by a number of individual dealers, it has been found impossible to unite all the dealers—or even any appreciable number of them—on a co-operative plan of used car selling in any of the cities of northern California. The principal obstacle to this movement has been variation in ideas of prices, and refusal of many of the dealers to have the prices on their used cars fixed by an appraiser, even though that appraiser be chosen by vote among the dealers.

In these days of price competition some of the dealers are getting larger discounts than other dealers, and also larger than they ever did before, despite lowering prices, and these dealers are enabled by the manufacturer to allow more for a used car than a competitor with a shorter discount can allow. Consequently, when they come to sell that used car they have to get more out of it—or think they have to get more—than the dealer who took it in at a lower figure. As one San Francisco dealer said recently:

"Any scheme to bring all the automobile dealers together in a co-operative used car sale plan will have to go clear back to the manufacturer, for he is the fellow who is to-day causing such a great variation in the prices of used cars. The manufacturer of one car allows his dealer a greater discount than the manufacturer of another car, even in view of recent price reductions. As a result the dealer with the greater discount is very apt to allow the prospect more for his used car than the dealer who has no such large discount is able to do. Thus the costs of his used cars slip up on the dealer with the big discount, sometimes before even he himself knows it, and he simply has got to 'get out from under.'"

"This dealer cannot sell his renewed, rebuilt, renovated—or whatever he calls 'em—cars at so low a price as the dealer who did business on a lower margin and neither will he agree to let an appraiser fix a balance between the two, so that

the dealer who allowed a high price and the dealer who paid a low price, can get together on a selling price. The dealer who bought his used cars at a low allowance quite naturally believes he can move them at his own lower price more rapidly than the dealer who took 'em in on high. Hence the low-priced man does

THERE are men in the automobile business—new car dealers—who believe that they and their contemporaries should have nothing to do with used cars; that the owner of such a vehicle should find a way to dispose of it and then buy a new car just as he would buy a new suit, for cash or on credit terms suitable to himself and the dealer.

Other dealers feel that to let the used car business get out of their hands entirely, possibly into dishonest hands, would hurt the automobile business in a general way.

In several cities exclusive used car dealers have been developed in large numbers and some of them have won for themselves enviable reputations. In some cities there has been a mushroom growth of dealers who have been referred to by the new car men as "curbstoners"—and there have been complaints by the new car merchants of unethical dealings on the part of these used car dealers.

Just now San Francisco dealers are watching, with mixed feelings, a considerable development of open air used car establishments. This story tells, without prejudice, of this development, for the news there is in it for the trade in various sections of the country.

not want to boost his prices, even to meet the high man half way. The result is that there is no middle ground on which dealers in new cars can meet for the sale of the used cars they have taken in. It doesn't seem very complicated to me, but the dealers and the trade associations don't seem to be able to understand it, and every once in a while some optimist starts out to form a co-operative company among the dealers in new cars to sell their old-cars. It never

has worked; it doesn't work now, and it never will work."

The result is that a new method of disposing of the used car, and, by the way, of enabling the owner of an old car to get a new one in a slightly different manner, has been put into action in the cities around San Francisco Bay, as well as in other parts of northern California. This is the open air automobile market, literally a "curb market" for automotive vehicles, from a 10-ton truck to a motorcycle.

These open air markets—very few of which, incidentally, are operated by men who have been in the automotive business, except as drivers or as repairmen—are operated on a three-way basis: The owner of a car can drive in, get cash for his car, get credit for it on another and better used car, or buy a used car outright, either for cash or on time payments. Thus, the man who has a used car and a small amount of money, can get a better car, and so by repeating the process, gradually raise himself to a new car of better make than the one he had, without pinching the family pocketbook. Incidentally, since the operators of these yards buy and sell at virtually uniform prices, their sales figures on used cars are quite usually, in fact uniformly, lower than those of the dealer who takes in the used car as part payment on a new car.

The used car owner who sells his automobile for cash has the money to pay down for a new car if he wishes to go direct to a new car dealer. This is an advantage to him, and relieves the new car dealer of handling the used car. No new cars are handled in the open air markets. Since the new State law regarding pedigrees and bills of sale for used cars is now in force there is very little chance of a stolen car slipping into one of these open air markets, the more especially since the operator of the market is held individually responsible for possession and delivery of such a car. Many of the open air yards, which have been in operation only a few months, are branching out with extensive repair plants and are rehabilitating and even rebuilding cars to such an extent that they are sold with guarantees.

Around each one of these open markets, too, has grown up a sort of automotive center, in virtually every instance, with tire, accessory and equipment, repair shops and service stations near at hand. The prospective purchaser of a used car is allowed to take it out for trial, even to keep it for two or three days, leaving his own used car, or some other security for it. Many of the dealers in new cars have noted a steady falling off in the offerings of used cars, and an increase in the number of persons, known to have possessed cars recently, who are offering first payments in cash, rather than turning in their

used cars, which apparently, have been sold for cash in the open air used car markets of the city. Needless to say, this meets with the approval of the new car dealer to a great extent, though some of these dealers, especially in San Francisco, are of the opinion that the open air markets reduce the sales of new cars by persuading the motorist to be contented with a better grade of used car.

At least two yards in San Francisco and one in Oakland have tried out the auctioneer as a means of disposing of used cars. While the "going-going-gone" system has not proved an unqualified

success in the few instances it has been tried out, it has sold some cars, and sold them at a time when the used cars were moving very slowly, so that the owners of the open air markets are of the opinion that it is merely a question of time and experience until the auctioneer is brought into the automobile selling business through the open air market for used cars. Inasmuch as overhead expenses and rents are lower, clerk and bookkeeping hire greatly reduced, the open air market can be operated on about one-half the cost of running even the most carefully managed used car department in a regular agency.

Here Is a Caravan That SOLD Motor Cars

A NOVEL, yet most effective and successful automobile advertising campaign is being conducted by the Grant Motor Car Co., in a "caravan" visiting the various cities of central New York.

The first city to be visited was Syracuse, July 18-19, next Auburn, July 22-23, and Utica, July 26-27, winding up in Oxford, Norwich, Cortland and Ithaca.

The coming of the Grant caravan to central New York was ushered in with large display advertisements in the papers, inserted by the Kepler-Merrill Motor Car Co., distributor of the Grant car, with headquarters in Syracuse and a branch office in Utica.

The "caravan" proved so popular in Syracuse and the cars sold so well that the second day of the event the Kepler-

Merrill Co. had to wire to the factory for more cars. And the same thing was true in Utica.

The eight cars used during the staging of the "caravan" in Utica were kept constantly busy during the two days' event, taking care of the many requests for rides. Briggs, the Utica manager, requested the factory to send another "caravan" of special models to Utica.

How the Motor Car Caravan Was Advertised

The Caravan Is Here!
To-Day Begins The
Grant Six
EXHIBIT

Of latest and special models, for two days only—Monday and Tuesday. Open and closed cars, new color schemes, wire and disc wheels—ten different cars. These cars are here by special arrangement with the factory to prove emphatically that the Grant Six is a car that sells itself. We want everybody in town who wants to know how good a car can be bought at a moderate price, to have a

RIDE IN A GRANT SIX

With ten cars we ought to be able to take care of everybody who wants to see the Grant or ride in one, but, to make sure, phone us and we will send a car for you.

1. Touring Sedan \$1450
2. Touring Sedan \$1450
3. Touring Sedan \$1450
4. Touring Sedan \$1450

Kepler-Merrill Motor Car Company
126 Lafayette Street Phone 2219

GRANT CARAVAN 6688 IN UTICA
Free information about this caravan and the cars it carries, write to: Kepler-Merrill Motor Car Co., Syracuse, N. Y. 520 P. M.

Caravan to Remain in Utica, Says Manager Briggs

Large display advertisements and news items helped acquaint the citizens of central New York State towns with the fact that the Grant caravan was in town. The caravan was a decided success and was directly responsible for several sales in the municipalities it visited.

PROFITS OR COBWEBS

?

Which Are You Making in the Garage Window

**The Story of a Young Detroit Garageman Who Painted
and Scrubbed and Did Other Things That Turned
Failure into Success**

THERE are about 35,000 garages in the United States. Some of them make money, and some do not. Few of them make all they could.

This is the story of a garage which once did not make much, if any, money, but which is now turning out a neat and growing profit for its owner.

The owner is 24 years old. His chief assistant is 25.

They are enthusiastic over the enterprise and regard the garage business as one of the nicest businesses there is. And it is—if you make it so.

The garage is Dunn's Garage, in the downtown section of Detroit.

The proprietor is Paul G. Dunn, 24 years of age, ex-accountant, ex-bond salesman, ex-automobile salesman, ex-adding machine salesman and ex-soldier.

THE garage used to be operated by a man who didn't have time to give it his personal attention. It got a sort of absentee treatment—and produced "absentee" profits.

Meantime, while the garage was pursuing its devious way, the pres-

ent proprietor was getting ready to be a real business man. He took a course in accounting and did all the other things previously mentioned and then went to war. When he came out of the army with a rank of sergeant major in the Motor Transport

Corps he set out to find a business for himself, and ran across the garage, which he bought in September, 1919.

One of his first jobs was to get a good manager, Arthur E. Sonnenberg, former sergeant of the first class in the Air Service. The rest of the organization consists of a young woman in the office and four colored boys, two of whom were in the army. In fact, army discipline and get-it-done tactics prevail throughout the little organization.

The garage is of two floors with capacity for 100 cars, with rates \$16 a month. They were recently reduced from \$18.

The first job the new proprietor undertook was setting up a new policy. He wanted his customers to feel that he was interested in them, was trying to give them service for their money and was honest and permanent. That was the first big job. Much of it was by personal contact and much of it by form letters and other literature mailed to the customers once every month, which practice is still in vogue.

With fair rates for storage and other service, the policy included an allowance for claims and damages caused in the garage. When an owner wants some little service rendered, or some damage, such as a broken lens, made good, it is done

Where Dunn Turned Cobwebs Into Profits



One window in this garage produced \$1,800 profit in a year and three months when turned from a junk pile into a merchandising display for accessories

cheerfully and quickly, the charge written off as general overhead. In the whole year 1920 this cost the garage only \$135 and earned hundreds of dollars of good will.

The first attack on the garage itself was on the floor. It was SCRUBBED. The oil and grease were removed and KEPT REMOVED. The garage is swept every day and is scrubbed with a scrubbing solu-

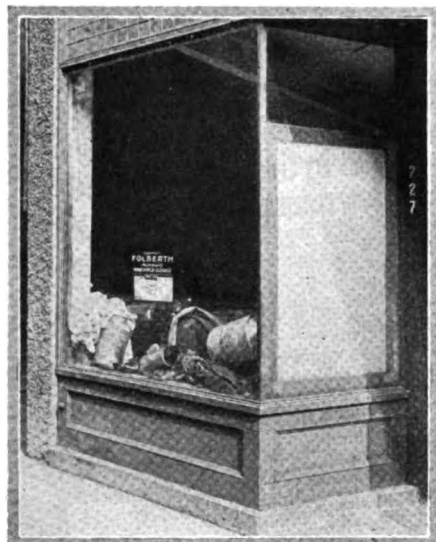
thing anyone happened to throw into it. First, the window was SCRUBBED. Then, \$1.80 went for a big sheet of paper board for a background, and \$1.60 for crepe paper for decorative purposes. That's all the expense there was—\$3.40—except time and thought.

The windshield cleaner was set in operation in the window, and every customer, at some time or other, was

profit. And he has just used some of his FOUND profits to paint the office.

Perhaps there might be some other garageman who would seek to add to his profits as did Dunn. If so, for him Dunn sets down these points:

1—Make your policy one of service to the customer. Keep personal contact with him. Send him letters every month. Do small favors for



Before—COBWEBS

Producing Profits Where Spiders Sported

THESE pictures tell, more than anything else, the secret of the success of Paul G. Dunn, twenty-four-year-old garageman in Detroit, who turned a business failure into a profit-producing enterprise through the application of plain, sane, homely merchandising ideals.

You'll enjoy reading about the success of this young ex-accountant, ex-bond salesman, ex-automobile salesman, ex-adding machine salesman and ex-soldier who painted and scrubbed and worked and won.

Why not read this story now?



After—PROFITS

tion often. The windows are washed often. The new proprietor white-washed the entire interior and repeats the job at least once a year. Before Dunn took hold the garage had never received such a shock.

When the new proprietor checked things over he found a rather deplorable system in vogue. The men had not been trained to be careful.

From then on army orders went into effect. The ex-soldiers swung into it automatically. The army had taught them that orders are orders and a fine degree of organization co-operation prevails. There are penalties for laxness, and no objection to the plan.

After the little kinks and knocks had been taken out of the business, the proprietor, ably assisted by Sonnenberg, began a process of developing added profits.

He investigated a windshield cleaner which operates from the intake manifold, and, when he was satisfied it was all right, stocked it and prepared to push it.

First he and Sonnenberg made a show window—which cost \$3.40. As is the case in countless garages, there was a perfectly good window which was used for a messy array of any-

approached on the subject. In a year and three months the garage has sold 300 cleaners, at a profit to the garage of \$1,800—\$120 a month—\$4 a day—profit from what used to be a cobwebby junk spot.

Now, Dunn is recommending a rear-end direction signal, which is also being demonstrated in the window.

There are several other windows, all of which will soon be displaying accessories and supplies and making money for the garage.

The business developed from this department runs between \$200 and \$700 every month, and means little added cost to the business. It is FOUND money.

When business began to slump some months ago Dunn and Sonnenberg canvassed their customers every day in a sales effort of some kind. The smiling young men were "kidded" considerably by their hundred customers because of their deep interest in "things the customer needed," but the customer, as is usually the case, was glad to buy.

Business is going so well that Dunn has just paid \$500 for a new bookkeeping system, so he can keep better track of who and what pays a

him gladly, and charge them up to overhead or something. Make him glad to do business with you.

2—Give service promptly and willingly.

3—Whitewash the interior of the entire building and keep it white.

4—Scrub the floor spotlessly clean and keep it so.

5—Wash the windows and keep them washed.

6—Paint the office and anything else that will stand it, and keep them painted.

7—Use your show windows.

8—Sell supplies and accessories, by display and by schooling everybody in the place on watching for opportunities to sell. Talk to your customers about buying articles you KNOW they NEED.

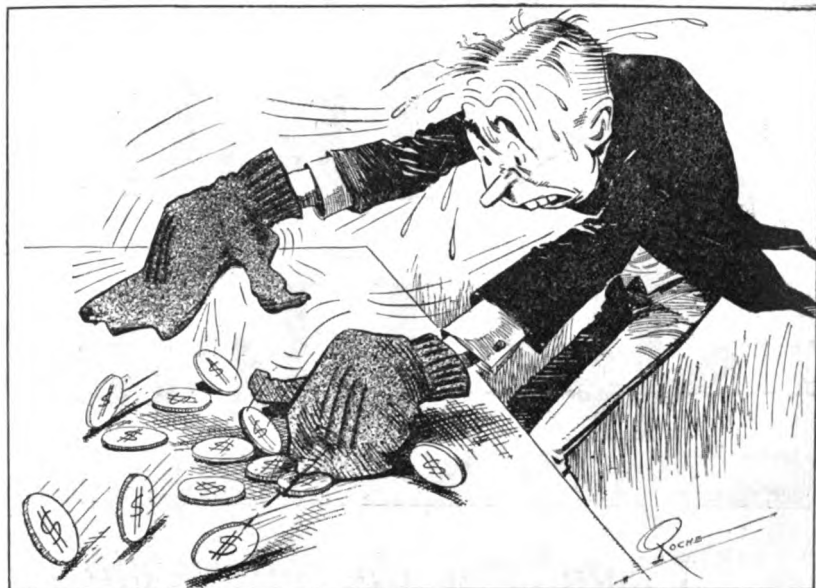
9—Maintain discipline, and have your force so organized that things get done. Have a manager.

10—Have an accounting system that will tell you where you gain or lose and it will lessen losses and increase gains.

And there you are. Dunn is just a smiling, alert, young man, filled with the joy of living and sold on the idea that the garage business is mostly what you make it.

Mitten-fit or Glove-fit

By NEAL G. ADAIR



"COME on in, Georgie," Tommy Trumbull called out as the junior Sennett salesman, fair-haired, pink-cheeked George Roper, hesitated outside the glass door of the general manager's office.

"Sure, come on in," echoed Reilly, seconding his words with a swing of the left arm which flung the door open, while his right hand grasped Georgie's and hauled him playfully across the threshold.

"Haven't seen you since I moved out to the gear works," added Reilly, smiling down on the salesman whom he caught as a cub and reared to quite a bear, as salesmen go, in the days before he gave up an active for a somewhat silent partnership in C. J. Reilly, Inc., of Callawassa.

"How's gears?" asked Georgie.

"H'm, sort of running in second," Reilly replied; "but looks as though we might shift into first pretty soon. How's cars?"

"Running in second too, and—and—darn it, some days, to-day, for instance, I'll say she kept slipping into reverse,"

Reilly dropped into a chair and Trumbull, who for several days had been on the verge of calling Roper in for a half hour of fatherly advice, waved Georgie into another seat and took one himself, seizing the opportunity to let the veteran Sennett distributor deliver the oration.

"What's wrong?" queried Reilly, turning on the salesman the smile that many a time had made him a confessor of Georgie's youthful shortcomings.

"Well, I've lost three sales in the last two weeks to Harder of the Redman outfit," Roper declared, adding with some vehemence, "and I had every dog-gone one of 'em led right up to the watering trough, too."

"And they wouldn't drink—well, maybe folks are sort of getting out of the habit," Reilly mused. "But, Georgie, what did these people say? To get down to cases—what did this bird say to-day that headed you for Tommy Trumbull's office with a face about as

bright and inspiring as a booth full of stock jobs at the annual show?"

Georgie pondered a moment. "Well, he said he wasn't convinced that the car would stand the usage he would have to put it to, and he wasn't sure but the wheelbase was too short, and if he remembered right, his cousin's Something-or-Other had a better grade of cushion leather, and—and—say, that guy wouldn't buy a pack of matches unless the manufacturer furnished a written guarantee that they would light!"

He paused for breath.

"Wasn't convinced—wasn't sure," Reilly said to himself. Then, turning to Georgie again: "Do you suppose it could have been your fault that he wasn't convinced or wasn't sure?"

"My fault?" burst out Georgie. "Why, I saw this know-it-all half a dozen times, or nearly that, and told him the Sennett story backward and forward and crosswise every time."

"You talked a lot," Reilly observed. "But did you say a lot?"

"Georgie," he continued, "you've been telling me about one of these ducks who knows a little—quite a little—about cars. And with those fellows a little knowledge is a dangerous thing—for the salesman. They ask questions that require expert answers, not just answers with a lot of words. I think you know the Sennett fairly well, but I don't believe you know some of our competing cars and their merits and demerits as well as you ought to, and I don't believe you always word your talks with prospects as well as you should, or even as well as you could. You get to thinking your language is as much a part of you as your skin, but you don't take half as much pains in keeping it clean and clear and in dressing it up to suit different occasions."

"Georgie, you and a lot of other salesmen are letting prospects slip out of your hands because your words don't fit your meaning—or they fit like a mitten instead of a glove."

"You ought to know everything there is to know about the car you sell and

everything of importance about the cars competing with it. You ought to know every change in mechanical or body design and know why it was made. And you ought to be able to talk about them so that your prospects would see—really see—the things you are talking about. This means study—study of your car and these other cars, study of what the engineers say and what the factory sales managers and advertising men say and what Tommy Trumbull says in his ads and pamphlets and sales letters.

"And all this, Georgie, would make your sales talks fit your sales ideas just about as well as a woodchopper's mitten fits a woman's hand."

The junior salesman gasped. "But you said—"

"I didn't say it, but I'm going to," Reilly went on. "You'll have to do more than read sales literature to make your language glove-fitting. You'll have to read literature—just plain literature without the sales."

"We must all read the newspapers, of course, and some of the magazines and once in a while a snappy story for relaxation, but if we're going to be convincing talkers we've got to read, at least a few minutes a day, some of those bulwarks of the English language all the way from the Bible down."

"But what—" Georgie began.

"Go into the library some day," said Reilly. "Take down a life of Lincoln and look up what books Lincoln read. Read some of them. And after you have done that you will learn of other books to read. You will enjoy them, which will take the curse off what looks like a job to you now, and you won't have quite so many prospects lustily telling you they are not convinced of this and not sure of that after you think you have them smothered in a million words."

"Not quite so many words—and better ones," commented Trumbull, taking a hand in the conversation.

"Just that," Reilly replied. "As one of my dear customers remarked the other day: 'Your men would get in oftener if they got out sooner.'"



Dollar Ideas

Earn a Dollar

MOTOR WORLD will pay \$1 each for ideas for this department. The ideas should have to do with sales and business management. The idea should be in two parts:

- 1—The problem.
- 2—The solution.

But if you'll get the idea on paper in any fashion whatsoever, we shall be glad to shape it up for you. Do two things:

- 1—Help some other man.
- 2—Make a dollar for yourself.

Visualizing the Sales Contest

THERE'S a mighty fine idea for the sales manager who is searching for something original to visualize the progress of his next sales contest. It was used recently by L. G. Peed, branch manager for Willys-Overland, in Toledo.

Along in the spring Peed was preparing to run a vacation contest. He made a large map of the northeastern portion of the United States and pictures on it a highway running from Toledo through Washington, Atlantic City, New York and up through the White and Green Mountains of New Hampshire and Vermont, down through the Adirondacks and thence back to Toledo by way of Detroit. The highway was graduated,

there being in all around 1,700 points. At the beginning of the contest a value was placed in points on each of the company's new and used cars. These points varied according to the amount of effort wanted to put behind the various models. The easy sellers carried 50 points and the more difficult sellers went as high as 150 points.

Then—and here's the novel part of the idea—each salesman was photographed and his photograph cut out with shears and pasted into a miniature automobile. These automobiles could be moved on the map each day, according to deliveries.

When the contest was planned it was

figured that 1700 points was about what the best salesmen could do, but the interest created by the contest was so great that one of the salesmen almost made two circles, and several others passed the 1700 mark.

A Publicity Idea That's Different

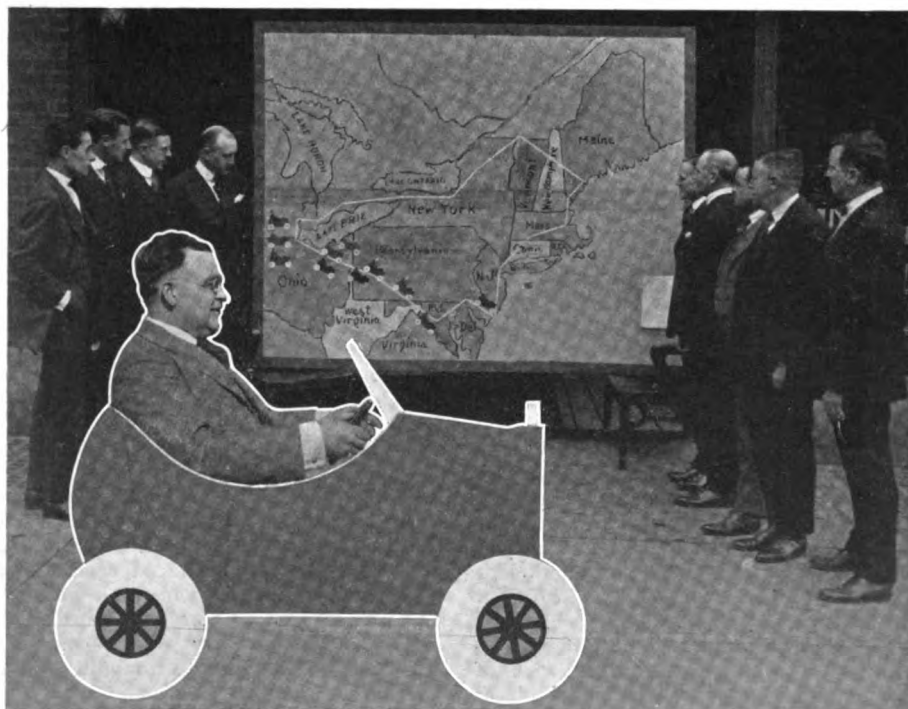
MCNUTT & CO., INC., of Knoxville, Tenn., Willard Battery dealer and distributor, recently published a unique advertisement in the Knoxville Sentinel, the copy being a replica of a Western Union telegram. The message was long and the company offered to give a Willard Threaded Rubber Battery, valued at \$41, free for the best re-written telegram not to exceed 25 words. The idea was that the contestant was to use the telegram published by the company as a nucleus and re-write it not to exceed 25 words. These were to then be delivered or mailed to the company's store and for the best one received the battery was to be given free to its author. The telegram originally published by the company was as follows:

"Received your inspection on my Threaded Rubber Willard Battery shipped to you under recent date. Pleased to learn that the threaded rubber insulation was still good, only the plates giving away. We are pleased to advise that this battery has been in use four years and two months, and have never had anything done except watered. Have noticed in the *Saturday Evening Post* that 178 car manufacturers use the Willard Threaded Rubber Battery as standard equipment. Send me a duplicate by first express. Will be in Knoxville some time this coming month, and will have you to check over the ignition system, generator and starting motor, as well as install a new set of lamp bulbs. Am mighty well pleased with the McNutt service."

Getting the Children to Help Sell Tractors

AMSLER & CO., McGregor, Texas, has capitalized the influence of school children upon parents in selling tractors and farm implements in its ter-

Here's a Good Sales Contest Idea



As a means of visualizing the progress of salesmen in a selling contest L. G. Peed, branch manager for Willys-Overland in Toledo, had pictures taken of the contesting salesmen and mounted them on small cardboard cars. See the map and story above for particulars

ritory. Amsler announced through local papers and through the teachers of the public and country schools that he would offer \$50 for the best essay, telling the advantages of the Advance-Rumely Oil Pull Tractor, which he handles. In order to learn these advantages it was necessary, of course, for the children to communicate with Amsler. He offered to talk with them at his place of business, but he also went to a number of schools to tell the story of the Oil Pull Tractor. On the day prizes were to be awarded the children and their teachers came to the Amsler store. On the program, besides the awarding of prizes were two or three short talks on the advantages of tractors in general and a musical program, after which the assemblage was taken to a local theater where educational films supplied by the manufacturer were shown. Amsler has noted a definite stimulation of sales and many new prospects, as a result of the interest and good will secured through the contest and program which followed the awarding of prizes.

Used Car Circulars Used Effectively

H. K. Dobson, president Dobson Auto Sales Co., Columbus, has devised a plan to sell used cars which he says has worked very successfully. Instead of advertising the used cars in the daily papers, a list of these cars, with full description and price is printed and mailed out to the homes in various parts of the city. Sections of the city are taken where the sale of used cars are most likely. Thus a section of the West Side, peopled by working men and high class mechanics was circularized recently with the result that many sales were made. It is found to be much better than newspaper advertising as the used car appeal is brought right into the homes.

A Service That Makes Customers for One Garageman

"HIGH-PRESSURE Free Air for Cleaning On Tap Inside," is the wording of a sign on the curb in front of Banner Garage, Lakewood, Ohio. This has served to draw in many motorists desiring to take advantage of this free service for making easy the difficult work of cleaning motor, chassis, body, top, and upholstery by other methods. Also, when they see an efficiently laid out and conducted garage, repairshop, and accessory department, they "speak up" or come back when there is something to be bought or fixed.

Mail Man a Good Used Car Prospect

A FORT WAYNE dealer has found that mail carriers are particularly good prospects for used cars and new cars of the smaller class. The mail carrier gets all the walking he needs during his daily rounds and he very readily considers a reasonable payment proposition in a purchase of an automobile that he can afford.

This Keeps the Salesmen on Their Toes

THE Pennell Auto Co. of Fort Wayne, dealer in Ford cars, has a sign-board in the main sales and display room on which the name of each salesman is given and the quota of cars he is supposed to sell during the month. Opposite this figure is the number of orders he has secured for the month and the number of cars he has delivered to cus-

club. "Twelve months for \$10.00, or \$1.00 per month for one month if you belong to our Forstner Road Service Club."

The company further announced that this service would be available to all paid-up members anywhere within a radius of twenty miles of the station, twenty-four hours a day, three hundred and sixty-five days a year.

With the initial advertisements announcing the club application blanks

The Tire as a Special Display Feature



One of the most striking window advertising displays is that of the General Tire & Supply Co. of Tacoma. G. W. Sutherland, local manager for the tire concern, did some co-operating with both the cigar stores and the Tacoma Speedway management when he placed more than twenty of the mammoth 44 x 10 Cord in the prominent windows. Each tire had a circular card telling of the races at the Speedway, and also a large sign advising what brand to smoke. Another idea which took and which was original on the part of "General" Sutherland, was to put a large Cord in a cigar company's show window which has been run several thousand miles, and give several prizes to the contestants who guessed the nearest to the number of miles which it had been run.

tomers during the month. In this way the sales manager and the salesmen can see at a glance just how each man stands. And this sort of a thing tends to quicken rivalry between the salesmen and make them work harder.

A Co-operative Service Club Idea

THE Forstner Motor Sales Corp. of Chattanooga, Tenn., has organized a co-operative service club in that city and the adjacent territory whereby for a stipulated amount per month the automobile owner receives all necessary mechanical road service without additional cost. Membership may be taken by the month or annually.

"Forstner Road Service will serve you on the road, including wrecks, tow-ins, roadside adjustment calls, etc., but excluding tire trouble," the company's advertisement states announcing this new

were printed for the customer to fill out and send in with his remittance for membership in the service club. The plan is really in the nature of what might be termed service insurance.

This Builds Good Will and Business

TO acquaint all customers with the various departments of his establishment and all department managers is a policy pursued by H. W. Yenawine, of H. W. Yenawine Co., body builders and repairers, with very good effect. When a motorist enters the house to order a job either Yenawine or one of his associates invites him to inspect the various departments of his fine building and to meet the various department managers. The acquaintances formed, in the opinion of Yenawine, serves to invariably bring the customer back.

Editorial Observation

What the Owner Desires

ENDURANCE, economy and price.

These factors, in the order named, are the leading considerations of the motor car owner according to an analysis of the returns from a questionnaire recently sent by the National Automobile Chamber of Commerce to 20,000 car owners.

The relative position and percentage of the votes received by the various factors in the general average follows:

Endurance	15 %
Economy	14 %
Comfort	9½ %
Price	9½ %
Appearance	8 %
Service (good local repair shops)....	7½ %
Hill Climbing	7 %
Flexibility	6½ %
Endorsement (opinion of other owners)	6½ %
Specifications	6 %
Speed	5½ %
Appointments	5 %

While endurance, economy and price remain leading considerations through all price ranges and in all sections of the country there are noted slight changes of relative position in some price and geographical divisions. Comfort is second to endurance in the middle-priced car owning group and in the group above \$3,000 in price. Endurance received considerably more votes, however, in both these divisions. In the Southern States owners rated comfort of third importance, with economy a close second to endurance. In cars that sell under \$500 economy was first, price second and endurance third.

Service is rated from fourth to sixth place. Hill-climbing is considered to be relatively unimportant, but attains fifth place in demand for cars costing above \$3,000. Appearance ranges from fourth place in middle-priced cars and cars above \$3,000 to sixth in cars below \$500. Flexibility is another factor that is considered relatively unimportant, ranging about eighth place in all sections.

While the analysis is based upon only 10 per cent of the replies to the National Automobile Chamber of Commerce questionnaire, and is, of course, open to question concerning the preponderance of cars of any particular price level which may be a strong factor in influencing the results, the report contains much information that the automobile dealer may consider profitably in framing his selling appeal.

The report carries a particularly strong suggestion to those dealers among us who are still wedded to the idea that there should be nothing further to consider after the prospect has been whisked up some pet hill in the locality at a dizzy speed, or that the car is properly and finally sold when the prospect is acquainted with its speed, comfort and appearance.

Speed, appearance, hill-climbing, flexibility and even service rate low compared with endurance, economy and

price if we are to accept the results of the N. A. C. C. analysis.

Does this suggest conservation of some of the energy that some dealers are expending on hill-climbing, flexibility, speed and other favorite subjects of advertising and direct selling effort, and concentrating it more strongly in endurance, economy, price and comfort?

Does it not suggest topics upon which particular stress may be laid in dealer advertising at this particular time?

The report is an indication of public preference that is worthy of some consideration.

Efficiency or Waste! Which?

UNDER this heading the National Automobile Dealers Association, cooperating with the National Automobile Chamber of Commerce, is appealing to motor car dealers to support their efforts for favorable Congressional action on the Townsend bill, now before that body. The appeal says:

"Two highway measures are now before Congress. One of them, the Townsend bill, provides for a Federal highway commission, requires concentration of Federal funds on the main highways of the nation, insists upon drastic maintenance provisions, makes it obligatory upon States to meet Federal funds as States, grants a new formula to public lands States and appropriates \$100,000,000 annually for two years for road building purposes.

"The other bill, the Phipps-Dowell-Robison measure, as it is variously known, continues the road activities of the Government as a subordinate detail of the Department of Agriculture, leaves the location of highways on which Government funds are to be expended in the hands of forty-eight separate highway departments, put off all of the terms of its enforcement clauses for a period up to five years, thus practically nullifying them, and makes absolutely NO provision whatsoever for road building funds.

"The Townsend bill, the principles of which are supported by the National Grange, the Chamber of Commerce of the United States, the General Federation of Women's Clubs, the American Association of Engineers, and a great many other national organizations, including every unit of the automotive industry, is the result of more than two years' study in an effort to give the country a sound, modern highway policy designed to conserve government funds and to promote public welfare.

"The Phipps-Dowell-Robison bill, introduced in the present session, is in effect a continuation of the present policy. It is loosely drawn, and inadequate for the nation's highway needs.

"Economical expenditure of public funds has never been so vitally necessary as to-day. The Townsend bill is a public insurance against waste and as such is deserving of the fullest public support.

"If you agree with these principles write your representatives in Congress at once, urging their support of the Townsend bill and ask your friends to do likewise?"

Why not write TO-DAY?

LETTERS *from* READERS

Sales and Service Inseparable Says This Dealer

Editor, Motor World:—In the issue of Motor World of July 27 there appeared an article by Frederick C. Russell regarding the Service Station and some of its problems.

The term "Lack of Personal Touch" as is used by Mr. Russell to my mind is the key-note of the whole solution. I do not believe I am making it too strong to say that not more than one in one thousand service managers connected with the retailing of automobiles properly interprets the responsibility of his position.

Sales and service are positively inseparable if success of either is to be realized.

While the service foreman or manager may never write a retail contract he can and should be the greatest promoter of sales in the retail organization and if he realizes this or is properly instructed by the dealer or sales manager he easily becomes the most valuable man in the organization if he has a desire to be.

As voiced by Mr. Russell, Sales and Service are too distantly separated both as to viewpoint and location, at least in many respects.

I realize how difficult it is in large cities to secure quarters convenient for service if the salesroom is located in close proximity to the so-called shopping districts but in the smaller cities this can be easily overcome.

The salesroom is, I believe, without exception the headquarters for the dealer or sales manager, but a small part of his time is spent at the service station where by far the largest part of the operating expense is handled. He usually depends upon reports at certain periods to keep in touch with the transactions at the service station, his short and irregular visits tell him but little. The service foreman is usually a hired man, is not an efficiency expert and does not apply himself to cutting down or holding down operating expenses.

A car owner seldom comes to a service station expecting to have work done on his car and when he is experiencing trouble he is not often in a pleasant mental attitude and a thoughtless word or an indifference to his wants serves only to heighten his resentment and increase his displeasure. The service foreman being a hired man and not being, as a general rule, interested excepting from the job standpoint and having to listen to complaints and kicks is usually not the most pleasant fellow either and I fully believe that from such combinations emanate the greatest dislike for the service by the car owner.

There are, of course, exceptions and some service foremen are broad enough to shoulder the customer's worries and send him away satisfied but such cases are clearly an exception.

The dealer or sales manager fully realizing the importance of service to furthering of sales does all possible to make the service a success but this cannot be done when he spends so little time at the station.

The service station should be kept as clean and pleasant as possible and the courtesy should, if possible, exceed that shown at the salesroom for satisfied customers are our best assets to greater sales.

If the independent garage can operate at a profit, why not the service station? To my mind it can be but the proper foundation must be laid and the proper system men employed.—B. L. Hartwick, Chevrolet Motor Co., Quincy, Ill.

Helping to Make Better Automobile Sections in the Newspapers

Editor Motor World: The cartoon and lead articles in Motor World of July 27 on how to help the newspapers make more motor car purchasers is most interesting to the writer, who has been preaching the gospel contained therein for many years.

Every time a dealer hands an advertising solicitor a piece of canned publicity with no news value with a demand to publish it, he is asking the newspaper to cut his advertising rates. When this happens to me, I tell the dealer it is the

same as a prospective automobile buyer asking him to cut the price of his car. Our paper was one of the first in the United States to adopt a policy of handling its automotive news as other reading matter of a newspaper is handled, *absolutely on a news basis free from advertising influence.*

It was hard sledding for six months or so but gradually the dealers saw that their advertising pulled better and now only three or four in the entire territory would have it otherwise.

The proof of the pudding lies in the fact that our automotive advertising lineage began increasing and to-day we carry twice as much of this class of advertising as our nearest competitor. There are several of our State's newspapers that do not maintain a high standard in regard to automobile news. Even to-day, some new dealer occasionally hands me a piece of canned publicity along with an advertisement with the instructions that if I can't run the story to leave the advertisement out. Of course, I flatly refuse to accept advertising on this basis and in the end the dealer is usually more eager to pay for his advertising in the paper that publishes real automobile news.

The articles appearing on the automotive pages of our paper have a worthwhile news value. Each tells something of importance to car owners, prospective buyers and those interested in the automotive industry. The motor section of this newspaper is conducted without fear or favor by a man who has been carefully trained in this profession.—Southern Automotive Editor.

H. C. Roberts Employees' Picnic



All picnics are not "just picnics," as the employees of the H. C. Roberts Electric Supply Co., Philadelphia, will testify, concerning their first annual outing, recently held in Hulmeville, Pa. Races and more races were indulged in—potato, wheelbarrow, 50-yard dash for the girls, 100-yard dash for the fat men, and some of them are still running. The shoeless shoe race and ball game were the events of the day

A Department of
BETTER MECHANICS

Conducted by J. HOWARD PILE

No. 206

When asking for information, please state whether you maintain a permanent file of Motor World, as many inquiries are answered by reference to previous issues

Time Estimates on Studebaker Repair Operations

Factory Has Worked Out a Complete System with Forms, Schedules and Instructions for Keeping Accounts Which Makes It Possible to Estimate on Time and Parts Both, Giving the Customer an Estimate to the Penny

Part II—Group Operations, and Labor Time

FLAT RATE REPAIR PRICE LIST		FOUR CYLINDER Series 19 SH		SIX CYLINDER Series 19-20 Big Six EG. Series 19 Light Six EH. Series 20 Special Six EH.	
Oper. Nos.	DESCRIPTION	Single Operations	Combined Operations	Single Operations	Combined Operations
		Hrs.	Oper. Nos.	Hrs.	Oper. Nos.

AXLE, FRONT, INCLUDING STEERING CONNECTIONS —Group A					
1	Install steering knuckle bolt and bushings.....	5	1	6½	5
2	Install tie rod bolts and bushings.....	2	2	2	1
3	Adjust front wheel bearings....	½	3	½	3
4	Install new steering tie rod....	¾	5	¾	5
5	Line up front wheels.....	½		½	
6	Install steering knuckle.....	2		2	
7	Install steering knuckle thrust washer.....	1		1	
8	Remove and free up knuckle and tie rod bolts.....	2½		2½	
9	Install new axle.....	5		5	
10	Straighten axle and reassemble car.....	8		8	
11	Complete overhaul of steering connections at axle.....	15		15	

AXLE, REAR—Group B					
1	Install ring gear and pinion....	15		15	
2	Take end play out of drive pinion shaft.....	2	2	2½	2
3	Install pinion shaft bearings...	5	11	5	11
4	Install pinion shaft.....	5		5	
5	Install one rear axle shaft bearing.....	1		1	
6	Install one differential bearing.	8		8	

FLAT RATE REPAIR PRICE LIST		FOUR CYLINDER Series 19 SH		SIX CYLINDER Series 19-20 Big Six EG. Series 19 Light Six EH. Series 20 Special Six EH.	
Oper. Nos.	DESCRIPTION	Single Operations	Combined Operations	Single Operations	Combined Operations
		Hrs.	Oper. Nos.	Hrs.	Oper. Nos.
7	Install additional differential bearing.....	½		½	
8	Install differential case.....	10		10	
9	Install differential cross and pinions.....	8		8	
10	Overhaul differential.....	10		10	
11	Take end play out of axle shafts.....	1		1	
12	Install rear axle housing.....	15		15	
13	Install axle shaft.....	1½		1½	
BRAKES—Group C					
1	Reline service brake (1 side).....	2		2	
2	Reline emergency brake (1 side).....	2	2	2½	2
3	Reline one service and one emergency brake.....	3	4	3	4
4	Install set screw in internal band.....	1		1	
5	Install emergency brake cam shaft (one).....	2		2	
6	Install emergency brake cam shaft bushing.....	3		3	
7	Adjust service brake.....	1½		1½	
8	Adjust emergency brake.....	2		2	
BODY—Group D					
1	Install door bumpers in 1 door.....	1		1	
2	Install door hinge on 1 door.....	1½		1½	
3	Tightening body on frame.....	1		1	

FLAT RATE REPAIR PRICE LIST

FOUR CYLINDER
Series 19 SH

SIX CYLINDER
Series 19-20 Big Six
EG. Series 19 Light
Six EH. Series 20
Special Six EH.

Oper. Nos.	DESCRIPTION	Single Operations		Combined Operations	
		Hrs.	Oper. Nos.	Hrs.	Oper. Nos.

CARBURETOR—Group E

1	Install needle valve (Schebler)...	1			
	Float valve assy. (Stromberg)...			1	
	Float valve assy. (Ball & Ball)...			1	
2	Install float (Schebler).....	1		1½	
	Install float (Stromberg).....	1		1½	
	Install float (Ball & Ball).....				
3	Install float chamber gasket (Schebler only).....	1¾			
4	Install carburetor gasket at manifold.....	1		1	

CHASSIS, INCLUDING
SPRINGS, SNUBBERS,
ETC.—Group F

1	Install spring bolts and bush- ings in front springs.....	6		6	
2	Install spring bolts and bush- ings in rear springs.....	8		8	
3	Tighten all spring shackles....	2		2	
4	Install new spring shackle bolt, front.....	1		1	
5	Install new spring shackle bolt, rear.....	1½		1½	
6	Install snubbers (set of 4).....	2		8	
7	Install front spring.....	2	7 } 3½	2	7 } 3½
			3 } 4½	3	EH } 4½
			9 } 4½	3	EG } 4½
8	Install rear spring.....	3		3	
9	Oil springs.....	1½		1½	
10	Graphite springs.....	6		6	

CLUTCH—Group G

1	Install clutch facing.....	6	1 } 7	6	1 } 7
			2 } 7		2 } 7
2	Install clutch throw-out bearing.	4		4	
3	Reline clutch brake.....	2	3 } 2½	2	3 } 2½
			4 } 2½		4 } 2½
4	Install clutch brake spring.....	1		1	
5	Install clutch driving disc outer hub.....	2		2	
6	Install clutch drive shaft.....	3		3	
7	Install clutch engaging spring....	4		4	
8	Install clutch thrust bearing stud.....	4		4	
9	Install clutch thrust bearing....	4		4	
10	Install throw-out fork.....	2		2	
11	Install clutch shaft lever.....	2		2	

COOLING SYSTEM—
Group H

1	Install bottom radiator hose...	2	1 } 2½	2	EG } 2½
			2 } 2½		1 } 2½
			10 } 2½		2 } 2½
				2	EH } 2½
				1	2 } 2½
				10	10 } 2½
2	Install pump outlet hose.....	1		1	
3	Install water header.....	2		2	EH only

FLAT RATE REPAIR PRICE LIST

FOUR CYLINDER
Series 19 SH

SIX CYLINDER
Series 19-20 Big Six
EG. Series 19 Light
Six EH. Series 20
Special Six EH.

Oper. Nos.	DESCRIPTION	Single Operations		Combined Operations	
		Hrs.	Oper. Nos.	Hrs.	Oper. Nos.

4	Install water header gasket....	2		2	EH only
5	Repack water pump.....	1		1	
6	Install pump impeller.....	4		4	
7	Install fan belt.....	¼		¼	
8	Install fan bearings.....	2		2	
9	Install new fan.....	1		1	
10	Install top radiator hose.....	½		½	

DUST PAN—Group I

1	Install dust pan assembly.....	3		3	
2	Install radiator section dust pan.	1½		1½	

FENDERS, SPLASH GUARDS
AND RUNNING BOARDS—
Group J

1	Install right or left front fender.	3		3	EH
				3	EG
2	Install right or left rear fender..	2		2	EH
				2	EG
3	Install right or left splash guards	5		5	
4	Recover running board—right or left.....	3½		3½	EH
				3½	EG
5	Install new head light bracket..	1		1	

GASOLINE AND VACUUM
TANK—Group K

1	Install gasoline tank.....	2		2	
2	Install gasoline gauge.....	½		½	
3	Install gasoline line to vacuum tank.....	½		½	
4	Install vacuum tank float.....	1		1	

GENERATOR—Group L

1	Install generator.....	1½	1 } 2	1½	1 } 2
			2 } 2		2 } 2
2	Install generator coupling bumpers.....	1½	2 } 2	1½	2 } 2
			3 } 2		3 } 2
3	Install generator couplings.....	1½		1½	
4	Install generator armature.....	2	4 } 2½	2	4 } 2½
			6 } 2½		6 } 2½
5	Install generator brushes.....	2	5 } 4	2	5 } 4
			10 } 4		10 } 4
6	Install generator bearing, upper	2	6 } 2½	2	6 } 2½
			7 } 2½		7 } 2½
7	Install generator bearing, lower.	2	7 } 2½	2	7 } 2½
			4 } 2½		4 } 2½
8	Install new relay.....	1		1	
9	Install new ammeter, SH and EH.....	1		1	
	Install new ammeter, EG.....			1	
10	Reface commutator on armature	3		3	
11	Install new battery to ground cable.....	1½		1½	
12	Solder battery to ground cable..	1		1	
13	Install new connection on bat- tery cable.....	1		1	

IGNITION—Group M

1	Install breaker arm with plati- num point.....	1	1 } 1½	1	1 } 1½
			2 } 1½		2 } 1½
2	Install adjusting screw and platinum point.....	1		1	
3	Install ignition switch assembly.	1		1	
4	Install distributor gears.....	6		6	

Part I—Forms and Working of the System Appeared Last Week

Part III—List of Parts Needed in Each Operation Will Appear Next Week

FLAT RATE REPAIR PRICE LIST

FOUR CYLINDER
Series 19 SHSIX CYLINDER
Series 19-20 Big Six
EG. Series 19 Light
Six EH. Series 20
Special Six EH.

Oper. Nos.	DESCRIPTION	Single Opera- tions	Combined Operations	Single Opera- tions	Combined Operations
		Hrs.	Oper. Nos.	Hrs.	Oper. Nos.
MOTOR—Group N					
1	Burn carbon.....	1		2	
	Burn carbon and grind valves, Four-cylinder.....	10			
2	Burn carbon and grind valves, Light Six.....			14	
	Burn carbon and grind valves, Special Six.....			14	
	Burn carbon and grind valves, Big Six.....			14	
3	Install new valve cap, SH and Light Six.....	½		½	
4	Install new valve cap gasket, SH and Light Six.....	½		½	
5	Install all new valve cap gas- kets, SH and Lt. 6.....	1		1	
6	Install new valve, SH and Light Six.....	1		2	
	Install new valve, Special Six and EG.....			2	
7	Install new push rod and guide..	1		2	
8	Install each additional push rod and guide.....	½		½	
9	Adjust tappets.....	1		1	
10	Install new cylinder head, Special Six.....			2	
	Install new cylinder head, Big Six.....			2	
11	Install new cylinder head gasket Special Six.....			2	
	Install new cylinder head gas- ket, Big Six.....			2	
12	Install a new piston, SH and Special and Light Six.....	5		5	
	Install a new piston, Big 6.....			5	
13	Install each additional piston, SH and Special and Light 6..	1½		1½	
	Install each additional piston, EG.....			1½	
14	Install new rings on one piston..	3		3	
15	Install rings on each additional piston.....	1		1	
16	Install piston pin and bushing SH and Special and Light 6...	5		5	
	Install piston pin and bushing, EG.....			5	
17	Install additional piston pin and bushing.....	1		1	
	Install additional piston pin and bushing, EG.....			1	
18	Install connecting rod, SH and Special and Light 6.....	5		5	
	Install connecting rod, EG....			5	
19	Install additional connecting rod, SH and Special and Light 6.....	1		1	
	Install additional connecting rod, EG.....			1	
20	Tighten connecting rods.....	5		5	
21	Tighten main and connecting rod bearings.....	12		12	
22	Install gear casecover, SH, EG..	5		5	
	Install gear case cover, Special and Light 6.....			5	
23	Install cam shaft gear, SH, EG..	6½	23 } 8 24 }	6½	23 } 8 24 }
	Install cam shaft gear, Special and Light 6.....			6½	
24	Install crank shaft gear, SH, EG	6½		6½	
	Install crank shaft gear, Special and Light 6.....			6½	
25	Install front cam shaft bearing, SH, EG.....	10		10	
	Install front cam shaft bearing, Special and Light 6.....			10	

FLAT RATE REPAIR PRICE LIST

FOUR CYLINDER
Series 19 SHSIX CYLINDER
Series 19-20 Big Six
EG. Series 19 Light
Six EH. Series 20
Special Six EH.

Oper. Nos.	DESCRIPTION	Single Operations		Combined Operations	
		Hrs.	Oper. Nos.	Hrs.	Oper. Nos.
26	Install cam shaft, SH, EG.....	9		9	
	Install cam shaft, Special and Light 6.....			9	
27	Change oil in motor.....	1/2		1/2	
28	Install valve spring, SH and Light 6 only.....	2		2	
	Install valve spring, EG and Special 6.....			2	
29	Install additional valve spring, SH and Light 6.....	1/2		1/2	
	Install additional valve spring, EG and Special 6.....			1/2	
30	Install valve guide, SH and Light 6.....	2		3	
	Install valve guide, Special 6 and EG.....			3	
31	Install additional valve guide, SH and Light 6.....	1		1	
	Install additional valve guide, Special 6 and EG.....			1	
32	Install cylinder block, SH and Light 6.....	25		30	
	Install cylinder block, Special 6.			30	
	Install cylinder block, EG.....			30	
33	Install crank shaft.....	45		50	
34	Install rear crank shaft bearing SH, Special and Light 6.....	55		60	
	Install rear crank shaft bearing, EG.....			60	
35	Install front crank shaft bear- ing, SH, Special and Light 6..	55		60	
	Install front crank shaft bear- ing, EG.....			60	
36	Install front and rear center crank shaft bearing, SH and Special and Light 6.....	55		60	
	Install front and rear center crank shaft bearing, EG.....			60	
37	Install crank case, SH, Special and Light 6.....	55		60	
	Install crank shaft, EG.....			60	
38	Refit main bearings, SH, Spe- cial and Light 6.....	55		60	
	Refit main bearings, EG.....			60	
39	Install new fly wheel.....	8		8	
40	Take end play out of crank- shaft.....	6	21 } 15 40 }	6	21 } 15 40 }

MUFFLER—Group O

1	Install muffler assembly.....	1 1/2		1 1/2	
2	Install muffler front head.....	1 1/2		1 1/2	
3	Install muffler rear head.....	1 1/2		1 1/2	

OILING SYSTEM—Group P

1	Install new pressure gauge, SH and EG.....	1/4	1 } 7 6 }	1/4	1 } 7 6 }
	Install new pressure gauge, Special and Light 6.....			1/4	1 } 7 6 }
2	Install oil lamp.....	2 1/2		2 1/2	
3	Overhaul oil pump.....	3		3	
4	Install oil pump gasket.....	3		3	
5	Install new distributor pipe....	7		7	
6	Clean distributor pipe.....	7		7	
7	Install new oil throw ring.....	5		5	
8	Install new oil pan gaskets.....	2		2	
9	Install new oil gauge pressure pipe.....	1/2		1/2	
10	Repair oil float gauge.....	1		1	
11	Clean oil pan strainer.....	1		1	
12	Install oil pan screen.....	1		1	

FLAT RATE REPAIR PRICE LIST

FOUR CYLINDER
Series 19 SHSIX CYLINDER
Series 19-20 Big Six
EG. Series 19 Light
Six EH. Series 20
Special Six EH.

Oper. Nos.	DESCRIPTION	Single Operations		Combined Operations		Single Operations		Combined Operations	
		Hrs.	Oper. Nos.	Hrs.	Oper. Nos.	Hrs.	Oper. Nos.	Hrs.	Oper. Nos.

PROPELLER SHAFT— Group Q									
1	Install front universal joint bushings.....	2	1	3½	2	1	3½	2	
2	Install rear universal joint bushings.....	2			2				
3	Install new universal joint cross.	2	3	3½	2	3	3½	2	
4	Install front universal joint yoke	2			2				
5	Install propeller shaft with yoke.	2			2				
6	Overhaul front universal joint..	2	6	3½	2	6	3½	2	
7	Overhaul rear universal joint...	2			2				
8	Overhaul propeller shaft.....	3			3				
9	Install universal outer casing...	1½			1½				
10	Install universal inner casing...	1½			1½				

**STARTING SYSTEM—
Group R**

1	Install new starter motor brushes.....	2	1	2½	2	1	2½	2	
2	Install new starter motor armature.....	2			2				
3	Install starter brushes and re-face commutator.....	3			3				
4	Install new starter motor.....	1			1				
5	Install new starter motor chain.	½			½				
6	Install new starter clutch pawls.	4			4				
7	Install new starter motor sprocket.....	4			4				
8	Install oversize bolt in starter motor support.....	6			6				
9	Install new starter switch..... ½				½				
10	Install new starter clutch.....	4			4				
11	Repair starter switch.....	1			1				
12	Install starter gear case cover with bushing.....	2½			2½				

**STEERING GEAR—
Group S**

1	Tighten arm on worm gear shaft	1	1	1½	1	1	1½	1	
2	Take excessive end play out of worm gear shaft.....	1			1				
3	Overhaul steering gear.....	10			10				
4	Tighten steering gear in frame.. ¾				¾				
5	Tighten steering sector..... ½				½				
6	Tighten steering wheel on post. 1¼				1¼				
7	Install new steering post..... 4½				4½				
8	Install new steering wheel.....	1			1				
9	Install throttle shaft.....	1			1				
10	Install throttle control rod.....	1			1				
11	Install steering worm gear..... 4½		11	6	4½		11	6	
12	Install steering worm..... 4½				4½				

TOPS—Group T

1	Install top deck and side quarters, SH, Special and Light 6..	6			6				
	Install top deck and side quarters, EG.....				6				
2	Install glass in rear curtain (1 only).....	1			1				
3	Install rear curtain, SH, Special and Light 6.....	2			2				
	Install rear curtain, EG.....				2				

TRANSMISSION—Group U

1	Install transmission assembly..	5			5				
2	Install transmission case.....	8			8				
3	Install H & I. sliding gear.....	5	3	5	5	3	5		

FLAT RATE REPAIR LIST

FOUR CYLINDER
Series 19 SHSIX CYLINDER
Series 19-20 Big Six
EG. Series 19 Light
Six EH. Series 20
Special Six EH.

Oper. Nos.	DESCRIPTION	Single Operations		Combined Operations		Single Operations		Combined Operations	
		Hrs.	Oper. Nos.	Hrs.	Oper. Nos.	Hrs.	Oper. Nos.	Hrs.	Oper. Nos.
4	Install L. & R. sliding gear....	5			5				
5	Install countershaft drive gear..	8			8				
6	Install countershaft.....	8			8				
7	Install countershaft bushings...	10			10				
8	Install transmission main drive shaft.....	5	8	5	5	8	5		
9	Install front bearing on spline shaft.....	5			5				
10	Install rear bearings on spline shaft.....	5			5				
11	Install gear shift rod.....	2	11	2½	2	11	2½		
12	Install main transmission drive pinion.....	8			8				
13	Install main transmission drive pinion bearings.....	8			8				
14	Install reverse idler gear.....	1			1				
15	Install countershaft low gear...	9			9				
16	Install transmission hand control base.....	2			2				
17	Install countershaft int. gear....	9	17	5	9	17	5		
18	Install gear shift fork.....	2			2				

WHEEL—Group V

1	Install front wheel.....	1			1				
2	Install front wheel hub..... 1½				1½				
3	Install front wheel outer bearing	1			1				
4	Install front wheel inner bearing	1			1				
5	Install rear wheel.....	1			1				
6	Install rear wheel hub.....	2			2				
7	Install rear wheel or axle shaft bearing.....	2			2				
8	Install new rim..... ½				½				
9	Install new rim bolt..... ¼				¼				
10	Install new rim bolt nut..... ¼				¼				
11	True up rim..... ½				½				
12	Grease wheel bearings.....	2			2				

WINDSHIELD—Group W

1	Install upper frame with glass SH, Special and Light 6.....	1½			1½				
	Install upper frame with glass Series 19, EG.....				1½				
	Install upper frame with glass Series 20, EG.....				1½				
2	Install lower frame with glass, SH and Light 6.....	1½			1½				
	Install lower frame with glass, Special 6.....				1½				
	Install lower frame with glass, '19, EG.....				1½				
	Install lower frame with glass, '20, EG.....				1½				
3	Install windshield complete, SH and Light 6.....	3			3				
	Install windshield complete, Special 6.....				3				
	Install windshield complete, '19, EG.....				3				
	Install windshield complete, '20, EG.....				3				

**MISCELLANEOUS
Group X**

1	Fill all grease and oil cups, universal joints, starter clutch and clutch hub.....	3½			3½				
2	Fill transmission and differential	½			½				
3	Remove all wheels, fill bearings with grease and adjust wheel bearings.....	1			1				

SYSTEM IN BUSINESS

This Department Is Intended to Assist Motor World Readers in Working Out Their System Problems — It Will Answer Questions Concerning System and Accounting

Make the Accounting System a Constant Business Barometer and Advisor

THE value of an accounting system is entirely dependent on the use that is made of it. Unless the facts and figures recorded in the books are periodically analyzed and correlated a full return on the money spent in making the records is not obtained. Of course, accurate records of bills receivable and bills payable are of great importance, but the value of an accounting system does not end with the performance of this function. At the end

of the month a trial balance should be taken off the books and such statements as are necessary to the intelligent direction of the business prepared.

The Stratton-Bliss Co., Dodge Bros. dealer in New York City, has a monthly financial statement form which throws the spotlight on every nook and cranny in its business. It is an eight page, printed folder about 16 inches long and 11 inches wide. The first page is devoted to the analysis of income, the sec-

ond and third to the distribution of expense, the fourth and fifth to a statement of assets and liabilities, and the sixth and seventh to statistics. The last page is blank.

The income statement on the first page is divided into two sections. The upper half provides for the distribution of the income for the month just ended and the lower half for the year to date. The income is divided between three main sources: Car sales, parts sales and shop labor. Miscellaneous income is also provided for. The form is arranged with vertical columns opposite these divisions so that the sources of income will be shown. These vertical columns are headed as follows: Total, retail passenger, stockroom, shop, commercial, wholesale and used car. As an example, the income from car sales is entered in total but the statement also shows how this income was divided between retail, wholesale, commercial and used cars. This information is available for both the month and the year. This form also provides for the entry of net costs, the computation of gross profits and of net profits. These facts are given by departments and in total.

Expenses are also analyzed for the month just ended and for the year to date, the former analysis occupying page two and the latter page three. The two forms are identical except that in the monthly statement, a column is provided for the entry of the expenses of the previous month. All the expense accounts are listed vertically along the left of the form and vertical columns are provided opposite this list for the subdivision of the expense under the following headings: Total expense, selling retail, new car, stockroom, shop, general, commercial, wholesale and used car.

The statement of assets and liabilities is of the conventional form. An interesting feature found under assets is an item for prepaid expenses. Instead of charging in expenditures that will benefit the business over a long period in one lump, the expense is divided by the number of months it covers, and the portions for the unexpired periods are considered as assets. Such expenses as taxes paid in advance, insurance and legal retainer fees are of this character.

The statistics on pages six and seven (Continued on page 40)

The image displays several overlapping forms from a financial statement system. The top form is 'PAGE 1 Financial Statement INCOME STATEMENT' for the month of 1921. It has columns for 'TOTAL', 'RETAIL PASSENGER', 'STOCK ROOM', 'SHOP', 'COMMERCIAL', 'WHOLESALE', and 'Used Car'. Below this is 'PAGE 7 STATISTICS' for the month of 1921, which includes an 'INVENTORY' section with columns for 'THIS MONTH', 'JANUARY 1, 1921', 'SAME MONTH LAST YEAR', and 'JANUARY 1, 19'. Another form is 'PAGE 3 ANALYSIS OF EXPENSE ACCOUNTS' for the month of 1921, with columns for 'TOTAL EXPENSE', 'SELLING RETAIL', 'NEW CAR', 'STOCK ROOM', 'SHOP', 'GENERAL', 'COMMERCIAL', 'WHOLESALE', and 'Used Car'. At the bottom is 'PAGE 6 STATISTICS' for the month of 1921, with columns for 'THIS MONTH', 'TO DATE', 'THIS MONTH', and 'TO DATE' for 'WHOLESALE' and 'RETAIL' sales.

These excerpts from the financial statement give an idea of the arrangement of the various forms

SCIENTIFIC CONSTRUCTION

GARAGES

SHOWROOMS

REPAIRSHOPS

Conducted by DONALD D. BLANCHARD

Does Your Street Frontage Pay Dividends?

Location Determines the Value of Property—Display Windows Increase the Return on the Investment for Street Frontage

MOTOR WORLD is glad to receive and answer inquiries for garage plans, but in order that there may be as little delay as possible in submitting the plans desired it is imperative that the following information be given:

Size of plot, with rough sketch showing shape and its relation to adjoining plots; name and number of departments operated; number of cars to be shown in salesroom; number of cars in garage; any other pertinent details.

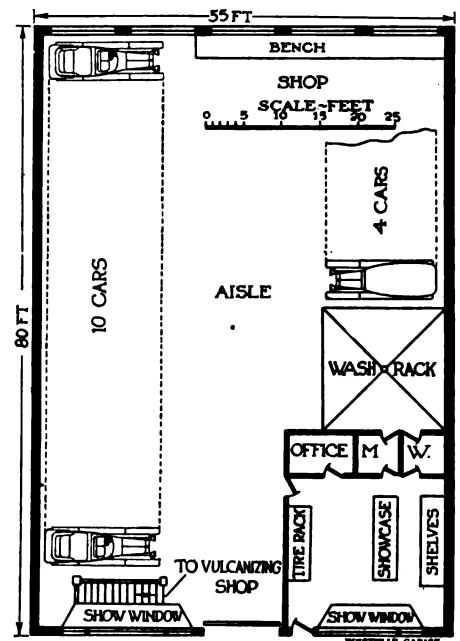
THE value of the street frontage from a business standpoint is generally the important factor in the determination of the value of a garage site. In other words, street frontage is largely what the garageman pays for when he purchases a piece of property. Consequently, in the erection of a building it is well worth while to consider how the greatest return can be obtained from this investment in street frontage.

In order to cash in on the investment in street frontage it is necessary to use it to draw trade. There is no doubt that many garages are not making use of

the advantages of their location in this way. There is a garage on Broadway in New York City that has a washstand on one side of the entrance driveway and a very untidy office on the other side. Merchants in other lines of business are located on every side of him and every last one of them is using his windows to help him sell his merchandise. This garageman has an opportunity to display accessories and supplies on an important street, and there is no doubt that he could build up a considerable trade not only among his own storage customers but also among neighboring car owners and transient trade.

In the garage illustrated on this page an effort has been made to realize on the investment in street frontage. Not only is a small accessory store provided, but the space on the left of the entrance driveway is utilized for display. Ordinarily this window would present an uninteresting view of a row of cars in storage. By building in a display window here, the garage has the opportunity of creating interest which in turn results in sales and the general appearance of the front of the building is also improved.

The interior of the store is approxi-



The vulcanizing shop and accessory stockroom are contained in the basement

mately 21 ft. square, and in back of it are located the office and toilets. It would be a good idea to put windows in the walls of the office so that a view of the store and garage could be had from this point. The toilets have doors opening both into the store and the garage. As long as a basement is to be provided for a vulcanizing shop, a stockroom can be put in here without any great additional expense.

The storage capacity of the garage will vary with the amount of work in the shop. The latter is not partitioned off from the rest of the garage, as it is desirable to have this department elastic. When repair work is heavy the capacity of the garage might be reduced to ten or even fewer cars. At such times the washrack might be pressed into storage service when not in use.



By placing display windows on both sides of the entrance driveway the general appearance of the building is improved and full use is made of the available street frontage

THE LAW

By GEORGE F. KAISER

Perplexed?

Does some point of law perplex you?
Why don't you ask MOTOR WORLD's legal editor to discuss the question?

Responsibility Depends on Relationship of Owner and Mechanic

Editor Motor World: We have had a novel case of automobile law in accident case arise a few days ago which we have decided to place before you for answer for our own enlightenment and for that of our customers.

A certain mail carrier in our town owns a big Paige car which he put in the hands of his neighbor who happens to be a mechanic and auto repair man for the purpose of doing some repairs on the car. The neighbor was an ex-service man and while in the service worked around machinery and hence the work was intrusted into his care.

The neighbor made the repairs and improvements and then (without the knowledge of the car owner) took the car out on the road and tried it out for a few miles. As he was thus trying the car out he speeded up the machine and negligently ran into the rear end of a certain Ford car which was proceeding easterly upon the highway and was lawfully on the right hand side of the road.

The Ford was badly damaged and the owner was compelled to make extensive repairs at the garage. The owner of the big Paige car refuses to make good the damage. The driver of the car in this instance and the man who did the little repair work has no property and is execution proof.

Question: Can the owner of the Paige car in the case cited be held responsible for the damage done by the driver of his car who had theretofore made the small repairs and then tried the car out on the road? Kindly let us have a prompt answer in this matter so that we may be properly enlightened.—Subscriber, Springfield, Minn.

Answer: Whether or not the owner of the Paige car can be held responsible for the damages caused by the negligence of the mechanic depends on what the relationship was between them.

If the mechanic was merely working for the car owner at so much per day or per hour, etc., and there was a relation of master and servant, I think he would be liable, as the accident occurred while the car was being tested, or while the mechanic was acting within the scope of his employment. On the other hand, if the car was turned over to the mechanic to be repaired as it would be turned over to a repairshop or garage, I do not see how the owner could be held

responsible, as in that event he would, of course, be "an independent contractor."

The only thing for the Ford owner to do is to sue both the mechanic and the Paige owner in the same action, and let a jury decide what the relationship between them actually was. The sooner local counsel is retained the better.

How to Get States' Motor Vehicle Laws

Editor Motor World: We have an organization of seven hundred or more members in Minnesota composed of garages and dealers in motor cars. We wrote to the Automotive Equipment Association in Chicago requesting information as to legislation, and they suggest that we get in touch with you.

What we desire is to know if you have made a study of the automobile laws of every State. What we desire to do is to compare the legislation we have with what legislation has been adopted and proved successful in other States with the view of having introduced such laws as we need that we haven't, and correcting such as we have that we shouldn't.

Please give us your opinion as to the best method of securing this information at your earliest convenience.—The G. O. A. of M., Minneapolis, Minn.

Answer: Almost every State in the Union publishes a little paper covered handbook containing the motor vehicle laws which have been passed and have become effective. Write to the Secretary of State of each State and with but few exceptions they will forward you the booklet postpaid and free of charge. Your proposition is too lengthy a one to be handled properly on this page.

Title Should Be Good in Another State

Editor Motor World: Where we sell cars on part time payments, we retain title in same which holds good in this State. Will you kindly advise what position we would be put in if one of these cars was carried outside of the State of Arkansas?—F. M. Co., Little Rock, Ark.

Answer: I believe the contract you made in your own State under the laws passed there would of course be held constitutional in the neighboring State but you never can tell. Some courts do funny things. That is the reason we so often have to appeal to higher courts to

have the kinks taken out of a wrong decision. In other words if you succeed in locating the car your rights ought to be the same.

Conditional Sale Supersedes Lien in Washington

The Supreme Court of the State of Washington recently decided that under laws of 1917, page 229, one performing labor and furnishing material on a truck had no lien thereon as against the seller of the truck under a conditional sale agreement. It appeared that the labor was not performed and the material was not furnished at the request of the conditional seller or anyone acting for it and that it never ratified such performance.

Wilcox on Oct. 21, 1919, sold a truck and delivered possession thereof to the defendant Mobley under a conditional sale contract, which was filed on Nov. 4, in the office of the auditor of Lewis County. Mobley in December began this action to foreclose a chattel lien, alleging that he had performed labor and furnished material on the truck on Nov. 3. The lien notice made no mention of Wilcox. By answer, Wilcox denied its liability for the claim, and alleged that it was the owner of the truck, and that at no time had it ordered, sanctioned, or authorized any repairs, and had no notice that they were being made, and alleged that no authority existed on the part of any one to order any repairs on Wilcox's behalf. Judgment for the amount of the lien, and foreclosure and sale were ordered. From this judgment Wilcox has prosecuted an appeal.

The court said chapter 68, Laws of 1917, limits the right of a lien of one who has performed labor or furnished the material to one who has performed the labor or furnished the material "at the request of the owner." It being indisputable from the evidence that Wilcox was the owner of the truck at the time the labor was performed and the material furnished, and there being no evidence that these things were done at Wilcox's request, or at the request of any one acting for or on its behalf, and it appearing that Wilcox had not ordered, sanctioned, or authorized, or had notice of or ratified the performance of the labor and the furnishing of the material, the judgment was erroneous in so far as it affects Wilcox and is reversed. —Wilcox vs. Mobley, 198 Pacific Rep., page 823 (Washington).

Repairshop Shortcuts

No. 3027—Removing Chevrolet Radiator Filler Neck.—A tool to remove the Chevrolet radiator filler neck is made from a piece of oblong metal with grooves at the sides to catch the tits of the neck. A handle with cross rod allows turning the tool.—Charles R. Simmons, Chevrolet Motor Co., New York City.

No. 3028—Repairing a Cylinder Head Gasket.—When a new gasket is not available, a broken or burned one can be repaired temporarily by cutting out a V-shaped notch, cutting a piece from another old gasket to fit in and shellacking it to place.—L. K. Bussey, Boons Mill Garage, Boons Mill, Va.

No. 3029—Fan Pulley Adjusting Wrench for Chevrolet.—A wrench for adjusting the Chevrolet fan pulley is made of drill rod bent as shown and with the ends bent over at right angles to act as a spanner in the holes.—Charles R. Simmons, Chevrolet Motor Co., New York City.

No. 3030—Running-In Stand for Chevrolet.—A running-in stand for Chevrolet engines, axles and gearsets is made by using a frame mounted on casters. An electric motor supplies the power by chain to the engine or by driveshaft to the rear axle.—Charles R. Simmons, Chevrolet Motor Co., New York City.

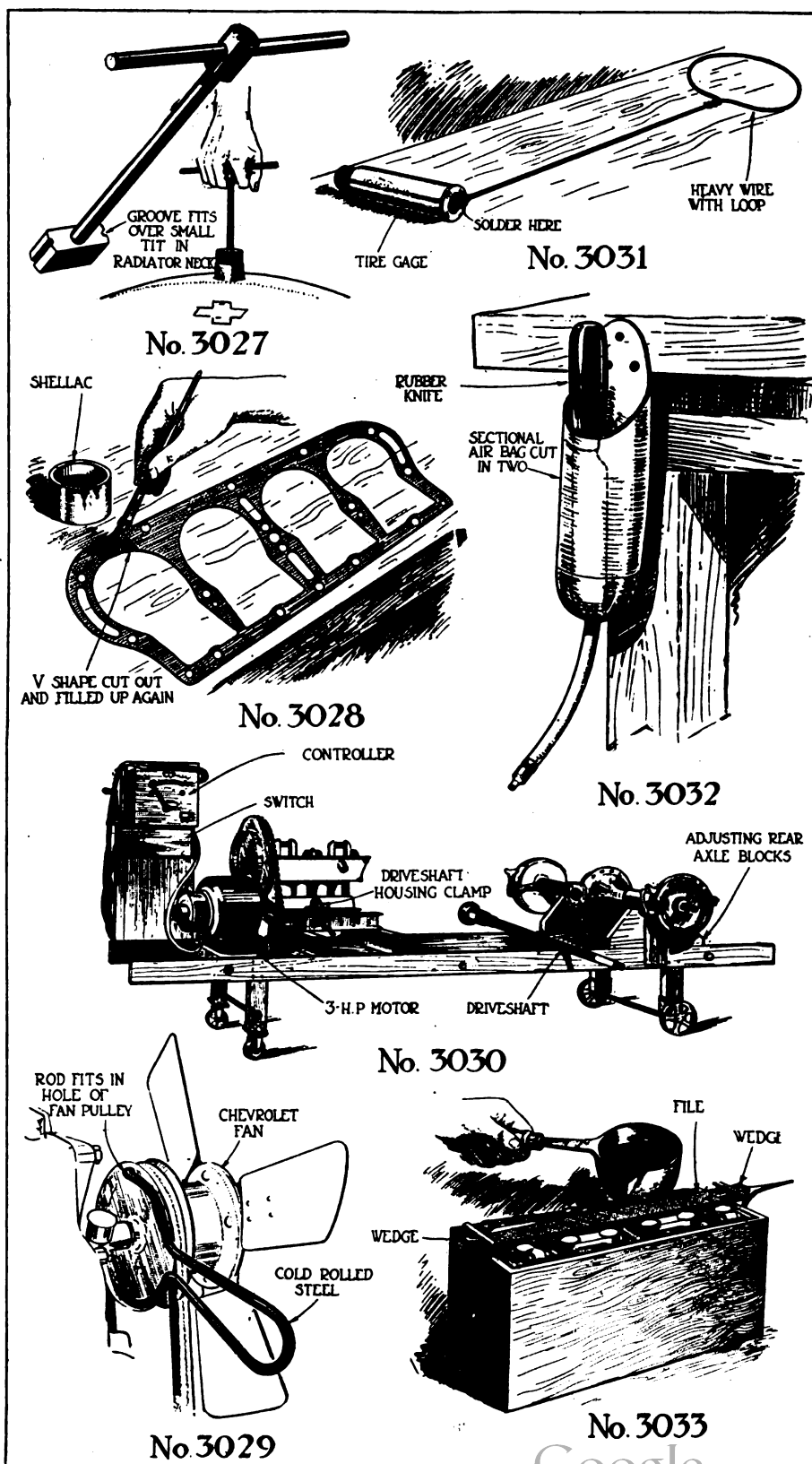
No. 3031—Hanging on to the Tire Gage.—Tire gages have a mysterious habit of disappearing into the customers' pockets and to prevent this, solder one end of a piece of heavy wire to the gage and bend the other end into a loop.—L. H. Meckstroth Garage, New Knoxville, Ohio.

No. 3032—Dipping Bag for Tire Knife. An old air bag is cut in two diagonally and hung at the side of the bench. Kept partially filled with water, it makes a handy place to dip the knife when tearing down casings.—R. E. Foley, Foley Tire Shop, Durango, Col.

No. 3033—Wedging Battery Cells for Pouring Compound.—To align the cells, a long file is caught under the battery handles and wedged at each end while the compound is poured.—Albert M. Bayer, Modesto, Cal.

MAKE A DOLLAR

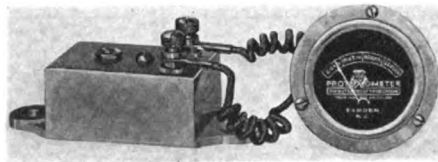
SEND in a sketch and a description of the device you doped out to make your work easier. Motor World will pay a dollar for every idea accepted for publication.



Automotive Equipment

PROTEXOMETER

An electrical temperature indicating instrument. It consists of two units, an electrical indicating instrument located on the dash or in the convenient view of the operator and a thermostatic electrical unit attached to the cylinder block of the engine. The thermostat is so arranged that when affected by heat it will cause a varying voltage drop in the electrical circuit through the dash instrument, and is so adjusted that one degree of heat causes a variation of one ohm in the resistance of the circuit. A contact switch is located in the thermostat, and when a certain high temperature is reached this switch is automatically closed, interrupting the ignition circuit, thus stopping the engine.—Protexometer Mfg. Co., Inc., Camden, N. J.



Protexometer



Double Seal Oil Control Piston

thrown out by centrifugal force the connections are fitted with ball check valves.—Bowen Products Corp., Auburn, N. Y.

DOUBLE SEAL OIL CONTROL PISTON

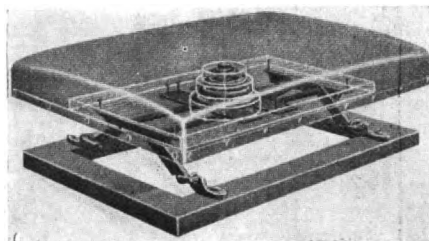
The action of this piston is such that the oil from the crankcase is said not to get up into the combustion chamber. It is claimed that this is due to a special oil control feature which equalizes the pressure of air, which is always present in the crankcase, by a corresponding amount of air pressure above the oil groove. This action causes the excess oil, which usually gets by the skirt of the piston to flow back into the crankcase from the oil groove. Pistons may be ordered from stock for the following cars: Ford, Dodge, Oakland, Oldsmobile, Scripps-Booth and Saxon.—Double Seal Ring Co., 2335 Michigan Avenue, Chicago, Ill.

SPRINGFIELD VISIBLE GASOLINE PUMP

In this pump the gasoline is pumped by means of a vacuum, which is supplied by a motor-driven vacuum pump, which may be installed any place in the garage. The motor is controlled by a vacuum regulator set on the vacuum pipe near the pump, which automatically shuts off the current when the vacuum is up and connects the current when the vacuum is down. The pedestal of the station is a reserve vacuum tank, and the operating mechanism is contained in the superstructure. The pump is made with glass cylinder containers of either 2½ or 5 gallon capacity. As fast as one cylinder is empty the vacuum, which is automatically connected, fills up the other cylinder. Price \$475. With meter, \$40 extra.—Springfield Mfg. Co., Springfield, Ill.



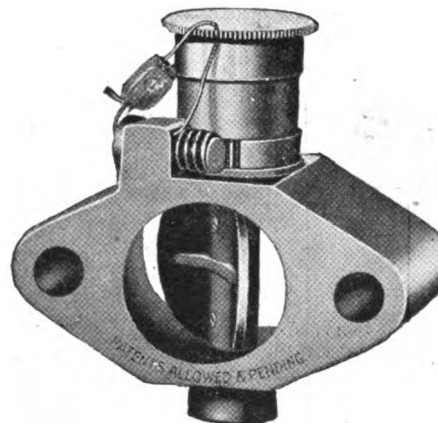
Springfield Visible Gasoline Pump



Seric Truxseet

SERIC TRUXSEETS

These seats absorb the shock through a strong adjustable coil spring. There is said to be no creep. Rods connect to the adjustable spring, and the hooks are shrunk to the torsion rods. Adjustment for drivers weighing from 150 to 250 lb. can be made by turning a nut on the coil spring. The coil spring takes the first shock and the steel rods communicate it to the hooks and links.—Seric Mfg. Co., 1305 Fifteenth Street, Racine, Wis.



Kurtz Gas Engine Governor

KURTZ GAS ENGINE GOVERNOR

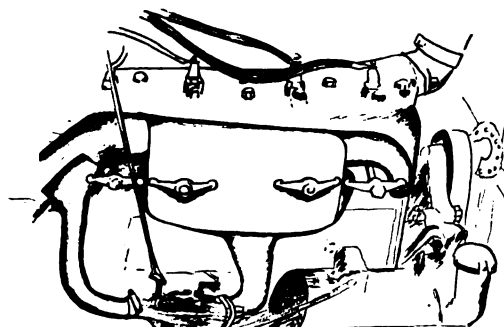
The feature of this governor is that it is controlled by the volume of fuel mixture. It consists essentially of a very light spring controlled butterfly valve which adjusts itself to the velocity of the gas passing into the intake manifold. It is said to be easy to install on most engines, as it has no moving mechanical connections and requires but 1½ in. of space between carburetor and intake manifold. At 1000 r.p.m. the governor oscillates 33 times per second, which is said to churn up the mixture.—S. E. Kurtz & Son, Sac City, Iowa.



Empress High Pressure Lubricating System

EMPRESS HIGH PRESSURE LUBRICATING SYSTEM

Either grease or oil may be used in this system. When grease is used the lubricant is forced into a position with a gun. If oil is used, the lubricant is put into the connection from an oil can. The complete system consists of a gun and three different types of dustproof connections, which are made up as follows: Straight connection, 45 deg. and 90 deg. All connections are furnished in a great number of different threads to fit any car and truck. Adapters are also furnished where it is necessary to use a connection on spring bolt head and other similar places. Where the lubricant is liable to be



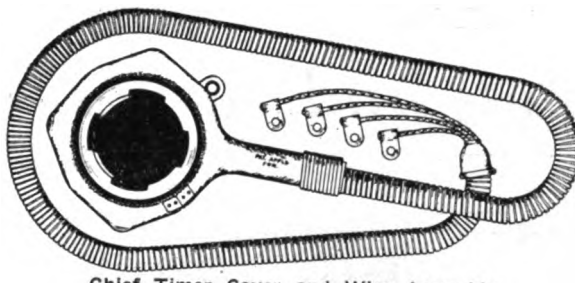
Intake Manifold Heater

INTAKE MANIFOLD HEATER

This heater is made of one piece of sheet metal and is clamped against the intake and exhaust manifold. In this way the heat from the exhaust pipe is carried to the intake manifold. It is designed for installation on the Ford engine.—H. D. Clark, 1569 No. Union Ave., Decatur, Ill.

CHIEF TIMER COVER AND WIRE ASSEMBLY

This cover is made of flexible insulating material that will conform to the shape of all timers that are approximately three inches in diameter and circular in form. It is oil and waterproof. The complete assembly consists of the timer cover and four wires incased in a flexible metal conduit which carries them to the coil box. It is said that this cover will fit all standard shape timers for Ford engines. Price \$2. Cover only 75 cents.—Chief Products Co., 2335 South Michigan Avenue, Chicago, Ill.



Chief Timer Cover and Wire Assembly

MAYO-SKINNER AUTO-MATIC WIND-SHIELD CLEANER

This device is operated automatically by the suction from the intake manifold or the vacuum tank to which it is connected by means of a piece of tubing. The cleaning arm sweeps back and forth across the windshield continuously. On enclosed cars it is firmly attached by drilling three small holes in the frame of the windshield; on open cars it is attached by an adjustable clamp. In order to attach the suction tube, it is necessary to drill a $\frac{1}{8}$ " hole in either the intake manifold or in the suction line leading to the vacuum tank. Price \$12.—Mayo-Skinner Co., 2115 Elston Avenue, Chicago, Ill.



Mayo-Skinner Automatic Windshield Cleaner

SCHRADER TIRE KIT

The kit contains a set of Schrader Kwik-On-An-Off dust caps, a set of rim-nut bushings, five valve caps, a valve-repair tool, a pump connection which permits the testing of the tire inflation without disconnecting the pump from the tire, a wrench for the tightening of the hexagon nuts at the base of the valve-stem and a Schrader universal tire pressure gage. Price \$5.—A Schrader's Son, Brooklyn, N. Y.



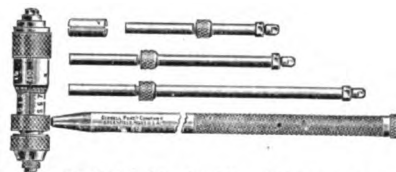
Schrader Tire Kit

ATWATER KENT TYPE N UNIVERSAL IGNITION COIL

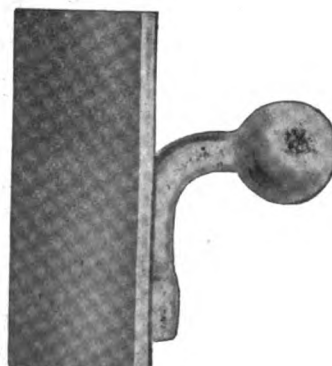
Adaptability is the feature of the new Atwater Kent Type N universal ignition coil which has been designed so that it can be used on any engine using battery ignition. It is made for operation on both 6 and 12 volt circuits. It is furnished with either flange or bracket mounting and the coil may be mounted in any desired position. The condenser used with this coil is an individual unit which may be purchased separately. This permits the use of this coil on systems in which the condenser is contained in the coil or on which a separate condenser is mounted on the distributor. The coil is encased in a steel container and has a molded condensate terminal base.—Atwater Kent Mfg. Co., Philadelphia, Pa.



Atwater Kent Type N Universal Ignition Coil



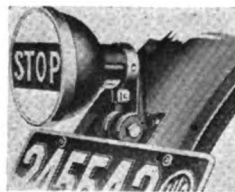
Goodell-Pratt Inside Micrometer



Ball Grip Handle for Fords

TRAF-O-LITE

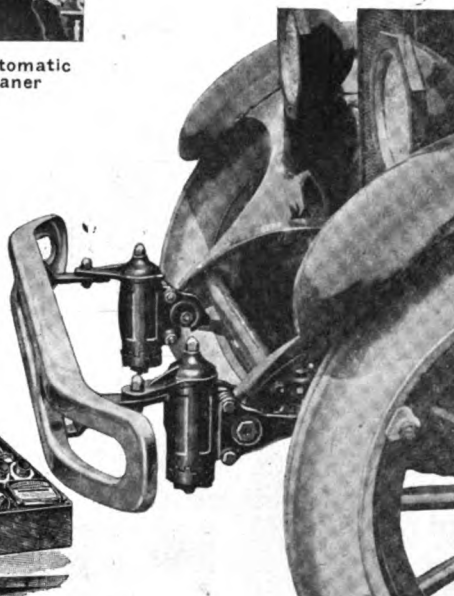
In this signal the tail light and stop signal are combined in a signal unit. Forward rays from the tail light bulb illuminate the red portions above and below the strip on which the word "Stop" appears. As soon as the foot brake is applied a high candle power light just back of the outer lens lights automatically, illuminating the strip on which the word "Stop" appears. The signal circuit is controlled by a special form of mercury switch. Price \$8.50.—Automobile Device Co., Cleveland, Ohio.



Traf-O-Lite

RAM SPRING BUMPER

This bumper uses a pressed steel double cross-bar connected to small vertical cylindrical housings secured to the frame. Within this housing is located a very heavy coil spring which is suitably connected to the front section of a lever arm and a connecting rod. The operation is simply one of winding the coiled spring up when an obstruction is encountered. In this manner protection is obtained against head-on and side blows. One side of the bumper may be deflected without materially moving the other side. The action of the coil spring may be varied by changing its tension which is done by loosening a nut on the bottom and winding up the bottom cap.—Ramspring Bumper Company, 110 South Dearborn Street, Chicago, Ill.



Ram Spring Bumper

GOODSELL-PRATT INSIDE MICROMETER

This inside micrometer, which is known as No. 618, will take care of all measurements by 1/1000 in. from 2 to 6 in. The lead screw has a $\frac{1}{2}$ in. run. Four measuring rods are furnished, and also a hardened steel collar $\frac{1}{2}$ in. in length which can be slipped over any rod between the shoulder and the chuck. A lower row of figures is graduated on the barrel, from which the measurement can be read directly, when this collar is in use, without the necessity of making allowances for the length of the collar. Each micrometer is furnished with a long handle for use in places that cannot be reached with the hand. Price \$12. Price of leather case \$1.80.—Goodell-Pratt Co., Greenfield, Mass.

BALL GRIP HANDLES FOR FORDS

This is an attractively designed handle which fits over the standard handle on the Ford car and is secured in place by tapping lightly with a hammer. The ball handle stands up above the top of the door so that it is easy to operate from either the outside or inside. Price, per set of three, \$1.25.—C. F. Loomis Mfg. Co., 428 Liberty Street, Peoria, Ill.

Neatness and Accessibility Will Help

This is an exceptionally fine example of interior display and arrangement. Note the effectiveness of the glass cases showing a few items and the glass enclosed shelves in the back counter, also the neatness and accessibility of the drawer construction. Bauer Brothers, dealer, Paterson, N.J.



Here is another type of shelf arrangement that facilitates selling. The samples on the drawers are particularly helpful in filling the customer's needs. Note also the large drawers below the ledge and the bins for heavy accessories at the bottom. Thompson Reilly Co., jobber, Newark, N.J.

This neat, compact arrangement for brake linings is built right into the wall. The floors of the compartments slope toward the back to prevent the roll from falling out. The cutter is attached to a board that the salesman stands on to hold it while cutting. Thompson Reilly Co., jobber, Newark, N.J.

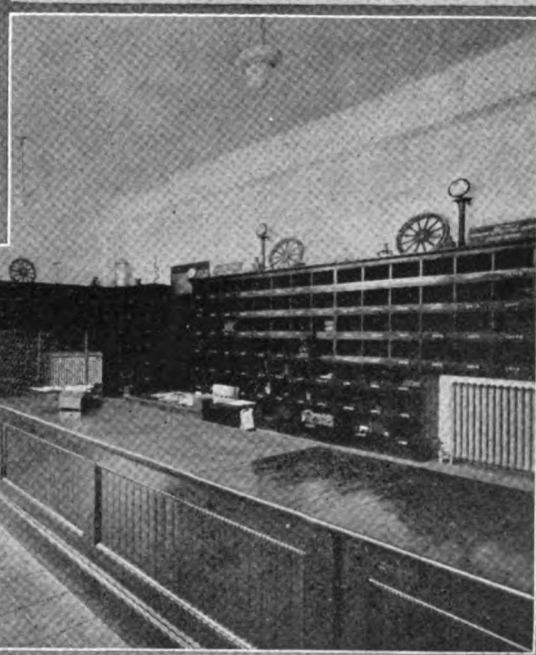


Sell Accessories in the Salesroom

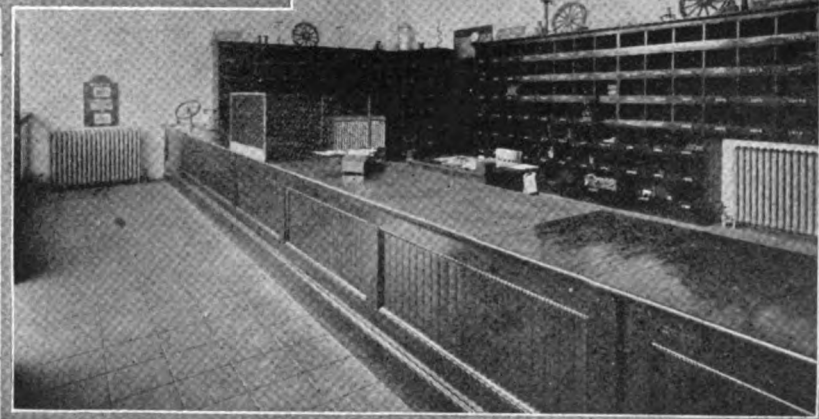
Handling of the many small parts used in servicing electrical equipment for motor cars is facilitated in this store interior and at the same time good display is secured. The store is only about twenty-five feet deep, the remainder of the floor being used for the service department. General Electric Co., electrical sales and service depot, Newark, N.J.



This is a Ford parts department in a jobber salesroom. Note the bin arrangement and the especially large bins under the counter and facing the customer for mufflers, propeller shafts, cylinder-head gaskets, etc. Slin Auto Supply Co., jobber, Newark, N.J.



A model Ford parts store. Note the long counter facing the entrance providing accommodation for a large line of customers. The picture shows the full depth of the store. Behind the store a large stockroom carries auxiliary supplies from which the bins are filled daily. New Jersey Auto Co., Ford sales and service, Newark, N.J.



M. A. M. A. Survey Gives Promise for Fall

ANALYSIS FOR JULY SHOWS MOVE FORWARD

Industry Not Only Held Own But Gained, Says Significant Report

NEW YORK, Aug. 29—During July the automobile industry not only held its own in the face of the normal seasonal slump but actually moved forward. The basic betterment of underlying conditions, as revealed by a searching analysis of current financial and commercial factors, gives promise for continued improvement, which should be more marked in September and October.

This is the significant feature of the regular monthly survey of the Motor and Accessory Manufacturers Association.

The concentrated experience and precise financial reports of more than 300 representative manufacturers of units and equipment for passenger automobiles and motor trucks form the basis for the association's statistical charts.

Accessories Increase

Purchases of parts, units and accessories by the vehicle builders increased 1½ per cent during July over June. Further encouragement was seen in the fact that the totals of notes outstanding decreased almost 8 per cent. The only unfavorable factor indicated by the month's figures was an increase of 10 per cent. in the totals of past due accounts reported.

The month-by-month percentage changes, beginning last January, follow:

Month	Per Cent Change*	Per Cent Change**	Per Cent Change***
January			
February	66.15 Inc.	17.07 Dec.	39.08 Inc.
March	93.30 Inc.	16.57 Dec.	18.38 Dec.
April	32.93 Inc.	4.49 Dec.	5.94 Inc.
May	00.13 Inc.	15.64 Dec.	16.77 Dec.
June	15.19 Dec.	4.79 Inc.	10.37 Dec.
July	1.68 Inc.	10.79 Inc.	8.90 Dec.

*Purchases of parts, units, equipment, etc., by automobile passenger car and motor truck makers from 300 parts and accessory manufacturers by months—per cent change.

**Totals of past due accounts reported—per cent change.

***Totals of notes outstanding—per cent change.

More Optimistic View

Credit managers and general executives of parts-manufacturing concerns are now inclined to take a more optimistic view of the present situation and immediate prospects, and they point to releases on deferred shipments, new orders and better collections to justify their constructive outlook. The vague feeling of alarm and discouragement which was evident in some circles sev-

SELLING MOTOR TRUCKS BY 'PHONE LATEST STUNT ON THE COAST

PORTLAND, ORE., Aug. 29—Motor trucks are being bought by telephone in Portland now. Closing deals for passenger cars by 'phone has not been altogether uncommon, but it is rather out of the ordinary for a business man to call up a truck dealer and place an order, according to H. H. Harwood, manager of the Portland branch of Mack International Motor Truck Corp.

Last week a truck was sold by this concern over the telephone to Kenneth Poorman, who requested that a 3½-ton Mack be delivered to him that day, and, after the management found that the machine was in stock of the correct wheelbase and other specifications, the order was closed and the purchase delivered the same day. This is the second telephone order received and filled by this concern recently.

eral months ago has been largely eliminated.

"We are too busy making business to have time for the blues," remarked one official in touch with many of the largest concerns in the industry.

The prevailing sentiment in the automotive field is reflected by the following typical statements, reported verbatim, at credit interchange group meetings held within the last fortnight:

Prevailing Sentiment

"Business with us is somewhat better than it has been for some little time; in fact, we notice quite a substantial improvement with the reduction in prices on popular-priced cars, although our sales are not anything like what they were a year ago. We have business booked now going until Sept. 15 or longer."

"Our sales have improved gradually from April 1 up to the present time; in fact, our sales for the month of July were very good and they are still holding up. June and July exceeded our sales for the same months last year. Of course it is true that our sales did not amount to a great deal in those months last year. Our collections have also been very good. We were a little doubtful about August, but were very much gratified up to yesterday. So our business, really, is showing a decided improvement."

"Our business this year in our products has been, of course, not anywhere near what it was last year, but July has been much better than June. In fact, June took quite a slump under May; but July was some better than either May or June. Collections are good as a whole. Some small accounts are feeling the strain of their own poor collections; on what we term miscellaneous business collections are hard to get. We have had to take weekly payments and do a lot of things that we didn't a year ago. However, the losses, handling it in that way even, have been small. So the little fellow apparently has been able to make some collections and do some business; in other words, he is getting a living, but probably not much more."

EASTERN SALES GROW, SAYS DEALER REPORT

Indiana Manufacturers Declare Business Is Holding Up in United States

INDIANAPOLIS, IND., Aug. 29—Reports from the various automobile manufacturers here show that business in the cars made in Indianapolis remains about the same throughout the country. It is significant to note that the reports show no particular territory far behind, with the exception of some sections of the South. Reports of sales made by dealers show that the eastern business is picking up slightly and the Pacific Coast sales appear to be a little stronger. No change has been noted in production schedules at the different plants. The H. C. S. Motor Car Co. now is working under its schedule of five cars a day. While some of the manufacturers here reduced prices with "mental reservations," it having been their private opinion at the time reductions were made that the result would be only a temporary increase in sales, they now have had time to see the result and they do not hesitate to say that the general reduction has stimulated business.

The sales forces here have been extremely active during the past week in an effort to cause August sales to equal the July sales. Present indications tend to point to an equal month with last month. The higher priced cars have had a good demand during the past week, which has heartened up the dealers considerably. Dealers in the Dodge, Chevrolet and Ford are confident there will be no slump during the month. This is considered remarkable in view of the fact that this is the big vacation month and hundreds of persons are out of the city. Accessory dealers also are having a good business, but it is not thought that this branch of the trade will equal the sales made in July. Tire dealers report a good business for August, but the volume will likely not be so large as in July, due to the cooler weather, they say, which has reduced tire wear.

Excise Taxes Fall Off

WASHINGTON, Aug. 29—Excise taxes assessed on automobiles for the fiscal year of 1921 fell off by \$23,377,031.63, according to preliminary statistics issued by the Treasury Department. The total yield for the past fiscal year of excise taxes on automotive equipment amounted to \$115,545,760.38. The effect of excise taxes in general was illustrated in the fact that the yield declined approximately \$36,000,000 since 1920.

30.7% of Nation's Farms Have Motor Cars

GROWING POPULARITY SEEN IN STATISTICS

Department of Commerce Compilation Shows Gains in Rural Sections

WASHINGTON, Aug. 29—Statistics compiled by the Bureau of the Census, Department of Commerce, as of Jan. 1, 1920, show that 30.7 per cent of farms in the United States have automobiles. The data proves the utility of the motor vehicle, for it shows that of the 1,979,564 farms reporting there were 2,146,512 automobiles in use Jan. 1, 1920. The Federal figures also show the growing popularity of motor trucks and tractors on farms.

About two farms out of every 100 in the United States as a whole possess motor trucks. Motor trucks were reported on 131,551 farms in 1920, making a total of 139,169 trucks in use on that date. Pennsylvania leads the field with 9372 motor trucks in use on farms, New York with 9259, Iowa with 8910, Ohio with 7319, Nebraska with 6548, California with 6416 and Illinois with 6154.

50 Per Cent in Some States

Automobiles were reported by more than one-half of the farms in eight states—namely, Nebraska, Iowa, South Dakota, Kansas, Minnesota, North Dakota, California and Illinois.

The following states reported more than 100,000 automobiles on farms in 1920: Iowa, 177,558; Illinois, 189,090; Ohio, 128,384; Kansas, 111,055; Minnesota, 107,824; Texas, 105,292; Nebraska, 104,453, and Indiana, 102,122.

It must be remembered that these statistics were gathered as of Jan. 1, 1920, and more than 18 months have elapsed since the compilation. Therefore, the data cannot be considered as indicative of present conditions, for enterprising salesmen have conducted active campaigns in this period, and as a consequence thousands of machines have been added to farm equipment. Neither can the figures be regarded as comprehensive, because they are passed on only 30.7 per cent of all farms and, as reports have not been received from an impressive majority, the figures cannot be used in any accurate determination of motor vehicle sales.

Tractors Are Gaining

The record of the Bureau of the Census shows that one farm out of every 28 owns a tractor as of Jan. 1, 1920. There were 246,139 tractors in use on 229,334 farms on the census date. More tractors were in use in Illinois than in

500 BID FOR "HOOTCH CARS" SOLD BY FEDERAL OFFICERS IN DETROIT

DETROIT, Aug. 29—Ten automobiles confiscated as liquor carriers were sold by Federal officers in this city at prices ranging from \$80 to \$1,500. Top prices were brought by a Stutz touring, 1920 model, and a Stearns roadster, 1920. The low price was for a Ford touring. An Oakland touring brought \$225; McLaughlin touring, \$405; Stephens roadster, 1919, \$900; Stephens roadster, 1918, \$550; Hupp roadster, 1919, \$485; Cadillac coupé, 1918, \$500; Anderson roadster, 1919, \$945.

So far as Federal officers could trace the identity of buyers there were two sales to used car dealers, the rest going to private owners. The buying crowd numbered about 500, but bidding was not spirited.

any other State, as statistics show 23,102 tractors in that State, with Iowa next, possessing 20,270 tractors; Kansas, 17,177; Minnesota, 15,503; California, 13,852; North Dakota, 13,006; South Dakota, 12,939, and Nebraska, 11,106. These eight states reported more than one-half of all tractors on farms in the United States. For the country as a whole there were 38.2 tractors for every 1000 farms in 1920, and for the eight states above mentioned, taken together, 106.8 tractors for every 1000 farms.

The states with the highest percentage of all farms reporting tractors in 1920 were as follows: South Dakota, 16.3 per cent; North Dakota, 15.2 per cent; Montana, 12 per cent; California, 10.3 per cent; Kansas, 9.8 per cent; Illinois, 9.3 per cent, and Iowa, 9.1 per cent.

Thefts Many in Texas

DALLAS, TEX., Aug. 29—Thefts of automobile accessories in Dallas will total some \$75,000 according to Parker V. Lucas of the automobile theft bureau. Lucas said the automobile owners and insurance men are losing that amount annually because of the promiscuous thieving here. He declared it has come to the place here where a man can no longer park his car and return to find it whole. Some of the accessories, parts or tires will be stolen unless they are locked. Because of the stealing of accessories and tires from cars in Dallas the Dallas insurance men have discontinued the insuring of these things entirely. Thefts of automobiles are increasing despite the efforts of police, insurance men and owners to check it, the reports say.

NEW ORLEANS FROWNS ON PROPOSED NEW TAX

Dealers Do Not Take Kindly to \$10 Levy to Aid City Paving

NEW ORLEANS, LA., Aug. 29—Talk of a special automobile tax of \$10 on each car to aid the city's program of paving is causing much concern among the automobile owners and dealers of New Orleans. The Constitutional Convention recently made it mandatory for the State Legislature at its next session to levy a minimum tax of \$15 per car on every automobile and truck in the State to foster a State-wide highway plan and likewise placed a tax of 2 cents a gallon on gasoline used and, with the possibility of the national Congress adding another burden they naturally do not take kindly to the municipal suggestions.

Strange to say the proposition has the backing of the paving committee of the Association of Commerce and members of that committee informally discussed the subject with one of the city commissioners and the city engineer.

DOWNWARD PRICE TREND FEATURES TORONTO SHOW

TORONTO, Aug. 27—Downward revision of Canadian car prices and many model changes were the outstanding features of the motor car show in the Canadian National Exhibition which was opened here tonight by General Sir Julian Byng, of British tank fame, and Canada's new Governor General.

The exhibition slogan is "Business Is Good" and almost without exception business representatives attending declare that business is better than anticipated and that they look for a gradual improvement in conditions.

Forty-seven car manufacturers and about thirty truck makers, mostly American, are represented. Particularly strong popular attention is being attracted by the new Durant car which was introduced in person by W. C. Durant, who spent the day talking with the trade and the public at his booth. Durant showed a green touring model. While the Canadian price has not been fixed, Durant said it would be "less than thirteen hundred dollars." Willys-Overland, Ltd., has a special Overland four in the show with a composite body and a new series Reo also is shown. Austin, Vauxhall and Fiat are the only foreign cars shown. The London Six, made in London, Ont., is a new Canadian product on exhibition.

The automotive equipment show is the largest and most representative held in the Dominion.

HAYES WHEEL AGENTS PLAN DISTRIBUTION

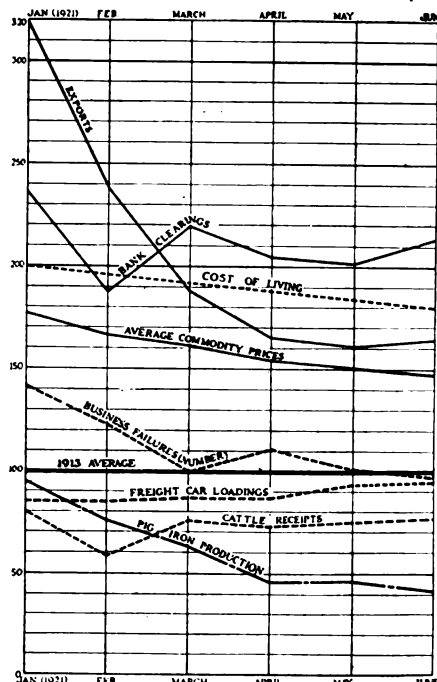
Twenty-five Distributors Assemble at Jackson, Mich., to Formulate Plans

JACKSON, MICH., Aug. 30—Twenty-five distributors handling Hayes wire wheels, representing fifteen states, gathered at Jackson, Mich., to discuss national distribution of the new type of wire wheel, meet the executives of the company, visit the Hayes' factories and to formulate plans for establishing service stations for wire wheels in order that users may receive the best of service.

Three full days were pleasantly and profitably spent, which included trips through the steel and wire division, and the wood wheel division, in Jackson; the Albion Bolt Co. and the hub division, in the city of Albion.

Social headquarters were established at the City Club, and business sessions were held at the service-sales division, where a complete exhibit of the full line of Hayes standard wheel products was shown, and which will remain as a permanent display and a part of the service-sales division.

The personnel of visiting party was: H. A. Waelchli, Automotive Wheel & Equipment Co., Dallas, Tex.; Kenneth Green, Green Brothers, Detroit, Mich.; C. E. Giltner, Minneapolis, Minn.; N. B. Burwell, J. B. Burwell Supply Co., Oklahoma City, Okla.; C. S. Slaker and William Vail, Hayes Wheel Co., Indianapolis, Ind.; E. A. Barlow, Harbison Mfg. Co., Kansas City, Mo.; E. O. Hunting, Auto Equipment Co., Denver, Col.; W. E. McClurg, Horseshoe Rubber Co., Des Moines, Iowa; F. S. Haines, Horseshoe Rubber Co., Davenport, Iowa; Ray Duff, Horseshoe Rubber Co., Minneapolis, Minn.; R. G. Nierman, Motor Rim Mfg. Co., Cleveland, Ohio; Kenneth McAlpine, Motor Products Sales Co., Seattle, Wash.; G. W. Lawrie, Evans-Lawrie Co., Boston, Mass.; W. D. Blood, W. D. Blood & Co., New York City, N. Y.; F. E. Miller, T. G. Northwall Co., Omaha, Neb.; L. K. Seward and W. F. Ziegenbein, Seward Sales Co., Jackson, Mich.; W. A. Gibson,



How Good Is Business?

CONDITIONS are improving. Here is an economic picture of the country as it stands to-day. In it Motor World has taken the business report of Herbert Hoover, Secretary of Commerce, to the end of June, eliminated some of the information not necessary to a general study of the situation. It is interesting to note that, with the exception of pig iron production, the trend of business in June was favorable. Exports, which tumbled abruptly in January, February and March, appear to have reached the bottom in May and show a light upward trend for June. Transportation shows a gradual improvement, while the average commodity prices and cost of living are still bending downward. Altogether there is much encouragement to be found in this report.

Hayes Wheel Co., Detroit, Mich.; C. A. Sartain, Motor Rim & Wheel Mfg. Co., Chicago, Ill.; and M. Schibbsby, Minneapolis, Minn.

MANILA WILL OPPOSE EXCESSIVE TAXES

Dealers Wage Vigorous Campaign to Keep Levy Down Within Bounds

SEATTLE, Aug. 29—With a view to preventing the imposition of excessive taxes on automobiles in Manila, the motor vehicle center of the Philippines, the Philippine Automobile Dealers Association is waging a vigorous educational campaign to present the value of the motor car in its true light and arouse public opinion to prevent the trade from being injured such as the automobile trade has been injured in Japan through the levying of exorbitant taxes.

Realizing that there is bound to be a new automobile tax law of some description enacted, the association has had a bill drafted for submission to the municipal board of Manila for their consideration. The following schedule of taxes is suggested:

Passenger cars—Fifty centavos (centavo, ½ U. S. cent) per horsepower, plus one centavo per kilogram for each such vehicle equipped with solid or pneumatic rubber tires, and two centavos additional per kilogram of gross weight and load when equipped with metal tires. All such vehicles operating for hire in public streets or places, or kept in garages or other places for the purpose of hire to the public, to pay double the rate above imposed on the horsepower and gross weight of each such vehicle and its load.

Trucks—All motor trucks, whether utilized for passenger or freight service or both, shall pay at the rate of fifty centavos per horsepower plus one and one-half centavo per kilogram gross weight of vehicle and load for such vehicle equipped with solid or pneumatic rubber tires, and one and one-half centavo per additional when equipped with metal tires.

Trailers—Ten pesos (peso, \$0.50 U. S. money) per metric ton, fractions thereof to be charged proportionately for all those equipped with solid or pneumatic tires; metal tired trailers to pay double.

Annual Clam Bake of the Automotive Service



Forgetting for the day the worries of the service station, members of the New York service managers' in the many contests and athletic events which were

CINCINNATI ARRANGES FALL ACCESSORY SHOW

*Manufacturers and Distributors
Will Exhibit at Demonstration
in November*

CINCINNATI, Aug. 30—John Behle, manager of the Cincinnati Automotive Trades Assn., is planning a Fall Automotive Accessory and Equipment Exposition, to be held at Music Hall, this city, one week in November, in which all local automotive merchants, manufacturers and allied interests are expected to participate.

In a letter sent out to members of the association recently the idea of the exhibit was outlined and returns from these letters indicate that the members are very favorable to the exhibit, which is a new idea for this city.

A similar exhibit was given last December in connection with the Ohio State Automobile Show held here. It far exceeded the expectations of those who had charge of it, and only about half as much space was provided as could have been used. The success of this venture is the foundation upon which the accessory show is being planned.

Last year the exhibit was made up of manufacturers who were showing their products chiefly to the dealers. This year the dealers and manufacturers will show their products for the benefit of the individual owners of cars and trucks. It will comprise everything in the line of accessories, equipment, supplies, and repair parts.

"There is every reason why it should be a success," said Biehle in discussing the proposed show. "Owners of automobiles have only a slight first-hand knowledge of most of the accessories that are made for their cars. This show will be a good place for them to see and learn about these things. Also, it will give the dealers and manufacturers an opportunity to place their products before the ultimate consumers."

The show will be open to the Cincinnati dealers, and all manufacturers who distribute their products through jobbers and retailers. Both dealers and

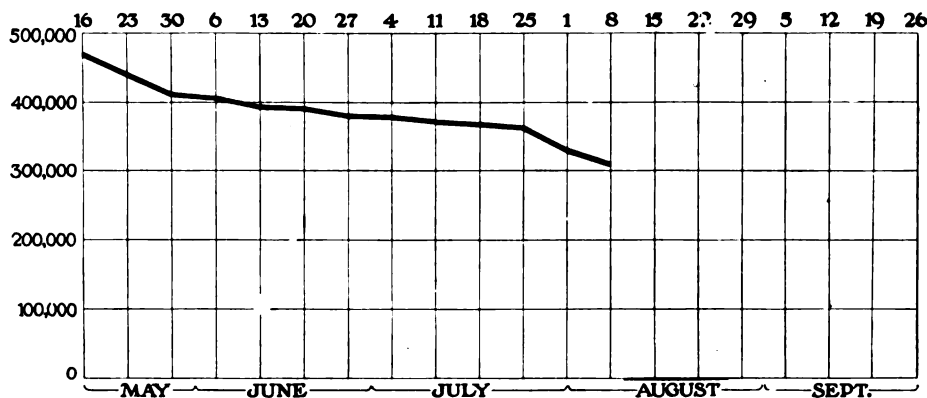
THIS DEALER-LAWYER-PREACHER OF GEORGIA TOWN LOOKS AS THOUGH HE HAD THE BEST OF THIS CASE

ATLANTA, GA., Aug. 24—In a small town the automotive accessory dealer may just as well be the town preacher, postmaster, lawyer, etc.

In one of these towns just outside of Atlanta a few days ago a salesman with automotive specialties sold a fairly good sized order. When the goods arrived, however, the dealer found that they were of inferior quality and not nearly up to the standard as claimed by the salesman. Therefore, he promptly returned them to the manufacturer. Shortly thereafter the house endeavored to force collection of the bill. First a sight draft was drawn on the dealer through the local bank, and was returned in a few days unhonored. The house then wrote the postmaster asking after the financial standing of the dealer, and was informed that he was O. K. By return mail the manufacturer wrote the postmaster asking him to secure an attorney for him and force collection of the bill. The manufacturer received the following reply:

"The undersigned is the dealer on whom you attempted to palm off your worthless specialties. The undersigned is also the president of the bank to which you sent your sight draft. Furthermore, the undersigned is the postmaster to whom you wrote, and the undersigned is also the attorney whose services you seek to force collection of this bill. Your methods are nefarious, considering the inferior quality of the goods sent me and the extravagant claims made by your salesman. The undersigned is so angry that if he were not also the preacher of the church in this place he would be sorely tempted to tell you to go to h—."

Idle Freight Car Record



The black line represents the record of idle freight cars throughout the United States. It is a business indicator of interest to all automotive men, and especially to the truck dealers. When the railroads are busy carrying merchandise it follows that manufacturers and merchants are busy fulfilling the orders of customers. Between May 15 and August 8 the average net car surplusage has shrunk from 469,770 to 308,312, a decrease of 161,458. In the week ending August 8 the shrinkage of surplus cars was 20,411. The chart above shows the gradual downward trend of freight car surplusage since May 15.

manufacturers will be solicited to create interest in the show.

In addition to the exhibits there will

be daily educational lectures and demonstrations for the motorist, also attractive entertainments.

Association of New York on Long Island Sound



organization recently took their families out on Long Island Sound for a clam bake and to take part scheduled. One hundred and twenty-five attended

DES MOINES TRAFFIC IS HANDLED BY BUSES

Street Car Service Off, Motor Transportation Proves Satisfactory

DES MOINES, IOWA, Aug. 29—Des Moines has now been two weeks without street car service and entirely dependent upon buses, trucks and motor cars for transportation. While even the most enthusiastic supporter of the buses will not claim that service is as good as furnished by street cars it is generally conceded that the automotive equipment has handled the emergency in a very satisfactory manner considering the handicaps under which the bus men are working.

Refused Franchise

The city council has thus far refused to grant to bus operators a franchise for any definite period beyond Sept. 1 and as all bus licenses expire on that date operators are hesitating to furnish the finances to properly handle the situation. The buses which were built specially for bus service are entirely satisfactory. Makeshift jitneys are the ones about which complaints are made.

There are no indications now of an early resumption of street car service. Chicago owners of the local street car system have served notice on the city that they will not put back the cars until they are given a franchise which is favorable to them. The franchise which they will submit is now being prepared in Chicago and will not be made public

until early next week. The local system has been operating under receivers for the past two years and after an eight-cent fare and bus competition at five cents had failed to bring about revenues to meet expenses a Federal judge ordered suspension of service.

JERSEY CITY WILL HAVE FALL AUTOMOBILE SHOW

JERSEY CITY, N. J., Aug. 29—Jersey City will have another automobile show this year, its second, the success of the initial one held last fall being so great it incited the members of the Hudson County Automobile Trade Association, who sponsored the event, to even greater efforts than they made last year. As in 1920, the display will be held in the Fourth Regiment Armory, and the demand for space greatly exceeds that of the first exhibition. There will also be a display of accessories worthy of inspection, while special days will include many features, the programs of which will be announced later.

Elmer E. Hallinger is president of the Hudson County Automobile Trade Association this year and he will be ably assisted by his fellow officers in carrying out the organization's plans. These include A. R. Southworth, vice-president; H. V. Lehman, treasurer; A. W. Elder, secretary, and Duncan Stuart, recording secretary. F. W. Payne, who was manager of the show last year, has again been retained in the same capacity. Payne has successfully handled many exhibitions, including the National Chemical, the National Flower and the Hotel Men's Exposition, in New York City.

\$70,537,620 ASSETS FOR MAXWELL MOTOR

"Prospects Bright" Says President Wilson Commenting on First Statement

DETROIT, Aug. 29—The first financial statement issued by the new organization of the Maxwell Motor Corp. shows total assets of \$70,537,620.28, as of June 1. Cash in bank and receivable from the reorganization committee totals, with certificates of deposit, \$7,931,361.34. Inventory stands at \$16,166,867.05. Current assets are shown as \$28,615,098.87 as against current liabilities of \$1,855,179.98.

W. R. Wilson's Statement

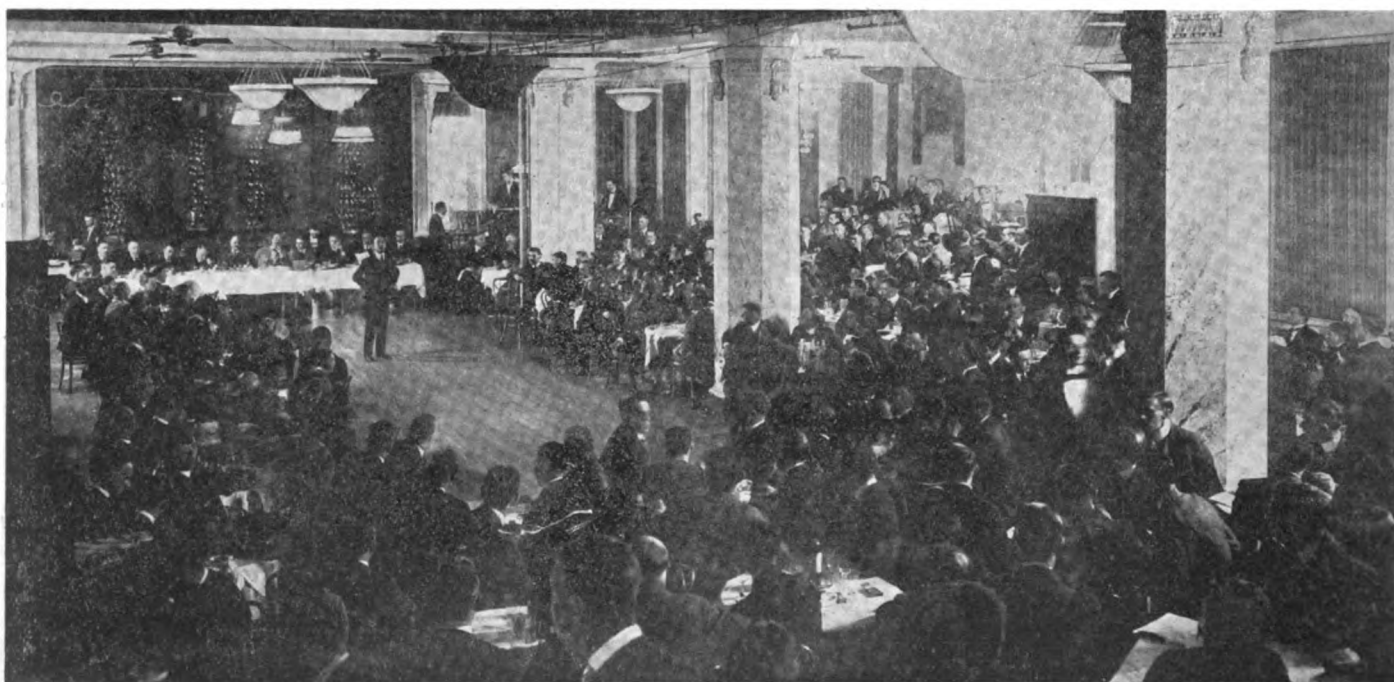
Commenting on the statement, President W. R. Wilson said:

"Assets in plants and equipment have been conservatively valued and adequate depreciation maintained, and the value of inventories has also received depreciation consistent with the fall of market prices, with substantial allowance for any further loss from this or any other causes.

"Inventories of the corporation are only a little more than 60 per cent of those of the old company a year ago, and sales have been effected to such an extent that the number of cars and trucks in inventory is only slightly in excess of daily production, and the number of cars in the hands of distributors and dealers throughout the country is less than normal.

"Your corporation embarks upon its undertaking with bright prospects. During the immediate future and pending the return of better business, efforts will be concentrated upon further improvement of the company's product, reduction of cost, conservation of cash, welfare of its distributors and dealers, and consolidation of its position. In other words, efforts of general preparedness for the increased volume of business which it is believed will be available in the industry within the next twelve months period."

Montreal Association Holds Annual Get-Together



The need of co-operative organization among dealers and plans for more aggressive merchandising of automotive products occupied the attention of some 500 members of the Montreal Automobile Trade Association, Ltd., at their annual get-together dinner, at the Claridge Cafe in June. Here's a picture of the gathering at dinner



Southern Jobber Holds Sales Conference

One of the most progressive ideas carried into effect by a Southern jobber, and one which is bringing increased efficiency and profit to the concern, was the three-day salesmen and manufacturers' conference held recently by the Fulenwider Auto Supply Co. of Birmingham, Ala. Here is a group of salesmen and manufacturers' representatives who participated in the event

CLEVELAND DEMAND FAR ABOVE AVERAGE

Dealers Predict Sales for Month Will Exceed August One Year Ago

CLEVELAND, Aug. 29—Statements of retail automobile dealers here that after harvest sales this year are exceeding those of a year ago for the month of August is borne out by conditions in industries that sell to the automobile trade.

August according to local leading retailers is running far better than August, 1920. Now that the harvest is about ended the farmers are commencing to receive money for their crops, sales of automobiles are increasing in the rural sections around Cleveland. The demand in this city is far above the average for August in the past.

Buying in the steel trade in the Cleveland district is better during August than it has been for many months. A large part of the buying is being done by manufacturers of automobiles, and this is taken as evidence that production will increase greatly in the fall. The buying movement in the steel industry reflects the low ebb that manufacturers have let supplies reach and also that it is generally understood that prices have reached rock bottom. Some of the newcomers into the automobile sheet field have made concessions of several dollars a ton to get trial orders.

Agencies Optimistic

The Wills Sainte Claire agency here, a newcomer to automobile row, reports that August business is running close to July figures, and that was a good month. Floormen state that persons visiting the salesroom daily run from 60 to 100. There is a healthy interest in this car and the management reports that sales exceed expectations.

The cut in the price of the Hudson

has greatly stimulated sales at the Stuyvesant agency—distributors of the Hudson and Essex. The price cut from present indications will send the record for August way above the average for the month and also will enable the company to do some nice business September, October and November.

The Dodge car is still selling at the same clip that made July this year one of the largest months in the history of the local agency, which is now the Barnes Motor Co. This firm will sell around 250 cars in this city during August from present indications.

The Chevrolet agency, which started a whirlwind business with the last cut in prices has not experienced a let down in August. Other agencies also report a healthy demand.

Additional evidence that business is healthy in this city came when directors of the White Motor Co. declared the regular quarterly dividend of \$1 a share payable Sept. 30, to stock of record of Sept. 15. Sales of trucks, especially in July, have been of a satisfactory nature and because of the generally improved conditions, the directors felt justified in declaring the regular dividend. It became known here that the White Co. had reduced bank loans \$2,500,000 since March 31.

MOTOR BUS EXPRESS IS PLAN FOR TOLL HIGHWAY

CHICAGO, Aug. 29—Alfred E. Case, head of the brokerage firm of Case, Boyd & Co. of this city is having plans drawn for a private toll highway between Chicago and Milwaukee, the road to be 200 ft. wide and to be laid in six one-way traffic sections. The base of the roadway is to be of concrete with asphalt surface, if built as planned. Branch roads leading to the lake regions of Wisconsin are to be part of the system.

Two of the six sections planned are to be for motor bus express; two to be operated as toll lines for private passenger cars and two as freight roads.

PACKARD OPENS BIG ADVERTISING DRIVE

\$200,000 Advertising Campaign for Fall Business Will Last Five Weeks

DETROIT, Aug. 29—Packard Motor Car Co. has launched a \$200,000 advertising drive for fall business, through the medium of local newspapers in all sections of the country. The drive will continue for five weeks, and will be staged throughout in close co-operation with the distributor organization in each territory.

The potential fall market for cars is so large, officials said, that the company feels fully warranted in investing \$200,000 in developing it. There is no question, officials said, but that sales of cars from Sept. 1 can be brought up to a high level by a well-planned and well-executed campaign.

The introduction of the single-six line has brought a great increase in the number of Packard dealers, and this number is being constantly augmented. Cities and towns which formerly were too small for twin-six representation have now regular Packard dealers who are turning in steady streams of new business.

Orders at the factory are showing gains. On Aug. 19 production on twin-sixes was one month behind orders. Truck sales in the first ten days of August ran 59 per cent ahead of orders for the same period in July. The increase in twin-six business for August over July was considered remarkable at the factory in view of the heavy price reduction made in July.

Reports from territorial distributors show good business. Twin-six sales in Chicago for July equaled previous three months' business. Detroit retail sales in July ran in excess of \$250,000. Reports from New York and Philadelphia showed dealers sold out of touring cars and awaiting deliveries.

FORDSON SELLING MERGED IN PORTLAND

**Large Building Rented on Coast
as Tractor Business Becomes
Greater**

PORTLAND, ORE., Aug. 27—The Fordson tractor business throughout the Portland district has grown to such an extent that this week separate quarters were obtained for this branch of the combined business of the six authorized Ford dealers of Portland. A large building on the east side, in the east side automobile district, was rented.

The six authorized Ford dealers of Portland recently amalgamated their Fordson business under one management, with W. J. Bell at the head. For some time headquarters were maintained with the Universal Car Exchange, the joint second-hand organization of the six dealers, but with the rapid growth of the tractor business separate quarters were found necessary.

Under the new arrangement the Fordson organization will have a force of seven men on the road and a staff of five service men for the Portland section, in addition to an adequate office force. In addition to the tractor business the company handles all of the 50 or more official devices for Fordsons, including farming and logging attachments, and its equipment business is one of the biggest features, it is said.

Make the Accounting System a Constant Business Adviser

(Continued from page 26)

do not cover the parts inventory but provide accurate information on car, truck and body stocks. The first form on page six is used to record the car, truck and body deliveries and sales for the past month and the year to date. The second form on this page is identical with the first except that it covers the corresponding periods of the preceding year. Page seven shows the inventory of Dodge Bros. cars for the month just past, the number on hand at the first of the year, the number on hand at the end of the same month last year, and the number on hand at the first of last year.

At the end of every month this complete statement is prepared by the accounting department for the use of the executives of the organization. It is an example of how one dealer is getting all there is in his books out of them. And the facts are gotten out in a form that shows the progress of the business as a whole as well as the progress of each department.

Southern Jobbers to Convene

MEMPHIS, TENN., Aug. 29—The Southern Automotive Jobbers Association will hold its annual convention in Memphis some time in November.

3-DAY SWAPPING CONVENTION IN SOUTH CAROLINA IS A SUCCESS

COLUMBIA, S. C., Aug. 29—An automobile swappers' convention was held for three days this week at Pickens, S. C.

Early on the opening day of the convention automobiles of almost every make, every size, all ages and colors began to arrive in Pickens, and in a short time there was such a swapping going on as is not often seen. Men who had had years of sharpening experience in trading horses exhausted their vocabularies in extolling the praise of some car which, for some reason or other, they wished to be rid of. This auto swapping convention is said to be the first held in the United States.

The swapping convention was in session three days and large numbers of cars changed hands.

NEW YORK OPTIMISTIC IN SPITE OF DECREASE

NEW YORK, Aug. 29—Although passenger car sales have suffered a slight decrease in the Metropolitan district during August, the dealers in general are optimistic. They point to the fact that sales during the last spring and early summer months were particularly good, and that it was not extraordinary to find a slight downward trend in August, with so many of their prospects out of town. The August decline did not develop until after the fifteenth, the first two weeks in most of the salesrooms equaling or at least closely approaching the July weekly sales record. Actual deliveries in July were slightly lower than those of June and in most cases better than May. In some instances the lower delivery record might be traced to the fact that certain manufacturers were caught unprepared for the large June and July demand, and as a result were three weeks or more behind deliveries on some models. An appreciable increase in sales is predicted as soon as Labor Day is passed.

UPWARD TREND IN RURAL BUSINESS IN CHICAGO

CHICAGO, Aug. 29—Sales for August in Chicago and controlled territory are not as brisk as they were through July. There has been a decided falling off both in actual sales and inquiries. July business was unusually good so that with the noticeable drop in sales business may still be said to be satisfactory. August this year compares favorably with the same month of last year.

The one bright spot as pointed out by Chicago distributors is the strong upward trend of rural business. Country dealers are finding more business than for many months and the prospects are for fall business that will be very satisfactory.

RETAILER TO HANDLE STUTZ FROM FACTORY

Olds Line Not Placed in Indianapolis—Lathrop Still Handles Cole

INDIANAPOLIS, Aug. 29—Following closely on the heels of the information that Coffin & Brown had closed for a distribution contract of the Wills St. Claire in Indiana, is the announcement that the Stutz which has been marketed by Coffin & Brown for several years, will again be handled in Indiana by a retail organization at the factory. Ray Brown plans for an opening display of the new line Aug. 29.

The Oldsmobile line, relinquished recently by the Wildhack Co., which took over the Reo, has not been definitely placed. It is understood that several well organized companies seek the contract.

Information received from the family of H. V. Lathrop, who recently went to San Francisco with the intention of a permanent residence on the coast, is that Lathrop will return to Indianapolis Sept. 1. No change has been made in the Lathrop-McFarland Co., distributors of Cole cars, and it is assumed that Lathrop will return to active management of that business. Unfavorable effect of California climate on the health of children in the family is understood to be the cause actuating the return here.

AUGUST SALES HOLD UP IN DES MOINES FIELD

DES MOINES, IOWA, Aug. 27—August still shows business holding up well in the Des Moines field, although the improvement is not quite so pronounced as was noticeable in July. Reports from practically all Des Moines dealers are that July was the best month in 1921, and practically equal to July a year ago. The stimulated business is particularly prevalent in low priced cars. There are signs that the money situation is improving slightly and some dealers report that with live stock prices advancing there are some healthy signs of interest among the farmers. Up to the first of August business with farmers was at a standstill. Conditions in northern Iowa seem to be better than they are in the southern half of the state. The majority of the conservative dealers are not looking for a continuance of the present improved condition in city sales past the close of September or early October.

Sherman Seeks Slogan

CHICAGO, Aug. 27—The Automotive Equipment Association, through its new merchandising director, Ray W. Sherman, has made an appeal to the industry for a slogan fitting the greater sales campaign now being waged by the association. All ideas for such a sales phrase are to be sent directly to Mr. Sherman, City Hall Square Building, Chicago.

TEXAS RELIEVED AS TRUCK BILL PASSES

*New "Motor Truck Law," with
Objectionable Features Out,
Regarded As Satisfactory*

AUSTIN, TEX., Aug. 27—Motor truck dealers and operators of these vehicles are much relieved by the passage of a bill by the legislature repealing the more objectionable features of the "motor truck law" which was enacted at the last regular session of the law-making body. As the measure finally passed both branches it increases the annual license fee on commercial vehicles according to net carrying capacity and tire equipment, but the mileage tax imposed by the regular session of this legislature is eliminated. Trucks and tractors used exclusively for agricultural purposes are exempted from the special license fees stipulated in the bill, but it is provided that license fees shall be paid on agricultural trucks according to horsepower just as now paid by automobiles. Fees for tractors not used for agricultural purposes are based on weight.

4-Ton Truck Limit

Under an amendment adopted by the conference committee a license shall not be issued to any truck of more than four tons carrying capacity, except on written application to the Highway Commission showing that roads would not be injured by such trucks. The bill provides, however, that no license shall be issued to trucks of more than five-ton carrying capacity.

Another section of the bill provides that county road superintendents or supervisors may during wet weather prohibit the use of any highway to loads of such weight as would damage the roads.

Speed limits are fixed according to gross weight of vehicle and load and according to tire equipment. Pneumatic tire equipment is favored in this as well as in the case of license fees, higher speed limits being allowed vehicles equipped with pneumatic tires as lower license fees have been provided for such vehicles.

Vehicles Must Have Mirrors

All trucks must be equipped with rear-view mirrors and no truck shall operate with solid tires less than one inch in thickness at any point or with pneumatic tires where one of such tires is missing. Drivers operating cars in this condition are subject to penalty of not more than \$200 as are also those drivers who operate vehicles of more than four-ton carrying capacity without special permit.

Following is the scale of license fees provided for commercial motor vehicles, which are defined as any motor vehicle designed for the transportation of property:

Carrying capacity, lbs., 1 to 2000; pneumatic tires, \$15; solid tires, \$18; 2001 to 3000

lbs., pneumatic tires, \$30; solid tires, \$36; 3001 to 4000 lbs., pneumatic tires, \$40; solid tires, \$48; 4001 to 5000 lbs., pneumatic tires, \$50; solid tires, \$60; 5001 to 6000 lbs., pneumatic tires, \$65; solid tires, \$78; 6001 to 7000 lbs., pneumatic tires, \$80; solid tires, \$96; 7001 to 8000 lbs., pneumatic tires, \$100; solid tires, \$120; 8001 to 9000 lbs., pneumatic tires, \$120; solid tires, \$144; 9001 to 10,000 lbs., pneumatic tires, \$150; solid tires, \$180.

For each trailer or semi-trailer drawn by a commercial vehicle or tractor, per 100 lbs. gross weight of vehicle and capacity load equipped with pneumatic tires, 15 cents; solid rubber tires, 25 cents; iron, steel or other hard tires, 35 cents.

Provided that semi-trailers equipped with iron, steel or other hard tires shall pay at the rate of \$1 per 100 lbs. of gross weight as specified under this section.

For tractors, the annual license fee shall be based upon the weight of the tractors as follows: 1 to 2000 lbs., \$5; 2000 to 4000 lbs., \$10; 4000 to 6000 lbs., \$15; 6000 to 8000 lbs., \$20; 8000 to 10,000, \$25.

Following is the speed limit scale. Commercial motor vehicles equipped with pneumatic tires: Maximum weight in pounds, including gross weight of vehicle and load: 2001 to 4000, 22 m.p.h.; 4001 to 6000, 18 m.p.h.; 6001 to 8000, 15 m.p.h.; 8001 to 10,000, 12 m.p.h.; 10,000 to 12,000, 10 m.p.h.

Commercial motor vehicles equipped with solid rubber tires. Maximum weights in pounds, including gross weight of vehicle and load: 1500 to 2000, 20 m.p.h.; 2001 to 6000, 15 m.p.h.; 6001 to 8000, 12 m.p.h.; 8001 to 10,000, 10 m.p.h.

RALEIGH SIX SOON TO BE PRODUCED IN BUFFALO

NEW YORK, Aug. 29—The Raleigh Six, which has heretofore had its home in New Jersey, will shortly move to Buffalo, where a new factory is being erected for the construction of a six-cylinder car which has been in the course of development for nearly two years. The car is an assembled product, using a six-cylinder type of Herschell Spillman engine, 3¼ x 5 in.; Borg & Beck clutch, gear sets, Merchant & Evans universals, Columbia axle, Gemmer steering gear and a Sharon frame. The starting and lighting are Westinghouse and ignition by Bosch magneto. One of the unusual features of this car is the fact that fuel is fed to the carburetor by Stewart vacuum system of 2-qt. capacity.

This is known as the Industrial size, and aside from a few tractors and trucks has not been very largely used in passenger car design. The carburetor is a Stromberg LB2 and the gasoline tank in the rear has a capacity of 17 gallons. The wheelbase is 132 in. and the Hotchkiss drive is through semi-elliptic springs. The wheels are of Harvey disk manufacture. The body is constructed by the American Body Co. and designs include five and seven passenger touring cars, three passenger roadster and sportabout. A sedan is later to be added. The touring car price is \$2250.

5800 Buicks Are Shipped

DETROIT, Aug. 29—Shipments of Buick cars for the first half of August reached 5800, or approximately one-half of the 11,750 production schedule set for the month. With the fulfilling of this schedule the company will come within 250 cars of the biggest month it ever enjoyed. Present indications are that production will exceed this figure and probably set a new record. The shipments include all models, a large part being the new four-cylinder car.

BAY STATE LENS LAW HAS DEALERS BUSY

*New Headlight Rules Start
Rush of Business—Demand
Exceeds Supply*

BOSTON, Aug. 27—Massachusetts is now in the throes of a headlight law with a scarcity of lenses to meet it, and thousands of motorists are going about frantically trying to get what they want in the way of new lights. Many of them waited until the last minute, as they do in registering. And the makers of lenses have been working night and day to get goods here, but not enough were available. One lens man stated that if he had 10 carloads in Boston, dealers from all over the State, and from some of the other States, would be racing in to get their share, fighting with the Boston dealers, anxious to take the whole shipment.

Business Is Brisk

It is a time of hustle and make money for the accessory people, and some of the car dealers have taken a hand in adding a little money to their finances by selling bulbs and lenses, also doing a focus business. All over the state men are opening up focussing stations and charging from 50c. up to take care of motorists' wants. General focussing costs an average of about \$1. Then there is the profit on the sale of 21 candlepower bulbs, and lenses. Also, there is shop work when brackets are to be bent down. As one accessory man remarked to-day discussing the sales: "God and the highway commission were good to us just when we needed help."

A lot of the motorists are trying to do their own focusing and the placing of the lenses. The State Motor Vehicle Department has had printed some cards giving directions for doing this work. But some of them are not having much satisfaction as they have bought the wrong size lens, or do not know how to put them in properly, with the result that it is not unusual to find on main traveled roads broken lenses every few hundred yards, or meet with cars whose lights are out of focus.

Put Out Warning Tags

It is doubtful if the law will be of much use for several weeks. Meanwhile the police chiefs of Massachusetts have all received letters with a lot of warning tags to place on cars not properly fitted with lenses when they see them parked by day. These warning tags will tell the owner he cannot operate his car at night until it meets the law's requirements, and the number if sent to the Motor Vehicle Registrar's office where it will be checked up. A second report of not being equipped will cause suspension of the license to drive, and perhaps the registration of the car. The owner, too, will be in jeopardy if he has an accident for not being lawfully equipped and the burden of blame would be on him.

ASSOCIATION ACTIVITIES

Indiana's Secretary Forum

INDIANAPOLIS, IND., Aug. 27—Tentative program for a "Secretary Forum" for automotive trade association secretaries of Indiana has been announced by L. M. Shaw, secretary-manager of the Indiana Automotive Trade Association. The program with subjects assigned to secretaries of various organizations has been sent out, with a questionnaire asking the secretary to notify the I. A. T. A. office of acceptance. Seven of the secretaries have already accepted and assured the I. A. T. A. of participation.

The purpose of the forum is to provide local secretaries throughout the state with first-hand information of the methods used by other secretaries, in successfully carrying out certain operations. Each subject will be handled by a secretary who has had personal experience with a successful project. Harry G. Moock, general manager of the National Automobile Dealers Association, has been asked to take part and be present to observe the working of plan. It is probable that, if the forum is the success which is hoped for it, it will be suggested to other state associations. The program as arranged now is dated for Sept. 20 and 21 and is as follows:

PROPOSED PROGRAM FOR SECRETARY FORUM

"Reasons for a Secretary Forum"—President N. H. Cartinhour.

"The Secretary—what he is and means to an automotive trade association"—H. G. Moock, general manager National Automobile Dealers Association.

Questions and discussion.

"Selling the association idea to the public"—Clem McConaha, Wayne County Automobile Trade Association.

"Popularizing the association and its purposes"—Hugh Perry, Howard County Automobile Trade Association.

"An automobile show building in a small city and how to get it"—Karl B. Voelz, Columbus Automobile Trade Association.

Questions and discussion.

"The used car and the secretary's place in aiding in solution and working out of this problem."

"Setting up a used car plan"—H. G. Moock, general manager N. A. D. A.

Questions and discussion.

"Selling memberships in local associations"—J. F. Frohbieter, Evansville Automobile Dealers Club.

"Declaring Dividends on association investments"—C. V. Bender, Muncie Automobile Trade Association.

"Effectiveness of the gentlemen's agreement as compared to rules and penalties"—S. M. Van Cleave, Marlon Automobile Trade Association.

Questions and discussion.

"How to bring out attendance"; "How to make committees work"; "Selection of committees"; "Making up a budget and why."

Questions and discussion.

Dallas Plans for Show

DALLAS, TEX., Aug. 26—Managers of the Dallas Automobile Trades Association have practically decided to hold the big fall automobile show during the State Fair of Texas and at the Fair Grounds here. The fall automobile show has been a fixture with the association for some time and it has always been held in connection with the fair. It is said the space at the Fair Grounds this year will not be as large as on previous occasions,

but that one of the most complete automobile shows ever staged in Texas will be put on. Dealers, it is said, will confine their displays to the cars they are concentrating their efforts upon. This will insure the display of practically every known car in America being displayed at the showrooms during the entire sixteen days of the fair. Inasmuch as more than a million persons will see the exhibits, it is expected the results of the show will awaken the automobile business throughout Texas, Oklahoma, Louisiana, New Mexico, Arizona and Old Mexico. Each dealer having an exhibit at the show will have an expert in charge of the display. They will have demonstration agents handy and will send cars from the shop to demonstrate if that is necessary.

The distributors of Dallas are planning to have their dealers in every section of the territory at the show for the purpose of better acquainting them with the various styles of cars and instructing them in selling tactics, should they need such.

It is understood truck dealers, accessory men and tire men will also have displays at the showrooms during the fair.

The committee on arrangements for the show this fall consists of F. E. McLarty, chairman; W. G. Langley, P. D. Winnings, George H. Gaston, R. J. Jackson, M. B. Sterrett and David F. Burke.

Address Springfield, Ill., Men

BLOOMINGTON, ILL., Aug. 26—Members of the Springfield, Ill., Automobile Dealers Association heard an address Aug. 10 from Percy E. Chamberlain of Denver, Col., on service conditions and how to reach the ideal in courtesy, efficiency and confidence. A number of Springfield bankers were guests of the dealers.

Jobbers to Meet at Memphis

MEMPHIS, TENN., Aug. 29—The Southern Automotive Jobbers Association will hold a meeting in Memphis in November, according to tentative announcement made here.

The organization has a large membership over the south and expects delegates from the principal southern cities. The exact date for the convention has not been announced, but it will probably be held early in the month.

Delco-Light Has Outing

DAYTON, OHIO, Aug. 29—A one week convention and school for district service managers was held by the Delco-Light Co., Dayton, manufacturers of Delco Light. The holding of these factory conventions has been an annual event with this company since the beginning of its business. More than 50 men were in attendance, representing the installation and service organizations in more than fifteen hundred sales territories in the United States and Canada.

Specialties Are Cut

Reduction of approximately 10 per cent in the list prices of Peerless automobile specialties is announced by the Columbus Varnish Co., Columbus, Ohio.

VOLUME OF BUSINESS IMPROVES IN INDIANA

Dealers Report Out State Sales Are Better Than Last Two Years

INDIANAPOLIS, Aug. 29—Throughout July the retail automobile merchants reported steady increases in volume of automobile sales. In that month the Indianapolis branch of Nordyke & Marmon recorded the largest business of its history. Indianapolis distributors generally reported that out-state business was better than had been recorded in the last two years.

The Malleable Iron Co., a new organization in a new plant in Kokomo, will open soon to supply the Haynes Automobile Co. and the Service Motor Co. of Wabash. The opening of this plant provides employment for 500 men. The Haynes company will average full normal production this month, although at times it has exceeded normal production. The Kokomo Rubbers Works has been busy and other automotive plants in northern Indiana are getting back to nearly capacity operations.

In the southern part of the state motor car and motor vehicle body manufacturers report very satisfactory increases in business.

The Lafayette Motor Co. is making five cars a day. Stutz has resumed on a small scale and the Nordyke & Marmon Co. is operating to near capacity.

General conditions in the state have become encouraging, the building trades showing much activity. Crops have been fairly good but nothing unusual.

DETROIT TRAILER HAS NEW HEAVY DUTY MODEL

DETROIT, Aug. 29—Detroit Trailer Co. has brought out a heavy-duty semi-trailer capable of carrying a load of 50 tons, which it is now preparing to go into production on. The semi-trailer was given a thorough trial last week and found fully practicable for the work designed. Several orders for first production were placed following the trial.

The semi-trailer departs from the conventional in that it has four wheels in line instead of two. This gives it a total tire surface of 48 in. and permits a load disposition of about 800 lb. per square inch. Each of the four wheels are mounted on special Mansfield axles with radius rods on ball joints. Double spring action is provided.

Specifications of the semi-trailer, in addition to Mansfield axles and steel frames, call for Timken bearings and Detroit springs. List price has been fixed at \$2,750.

Lumen to Open Branch

BUFFALO, Aug. 29—The Lumen Bearing Co. of Buffalo, N. Y., and Youngstown, Ohio, will open a Chicago branch.

CHANGES IN THE TRADE

Pettijohn Automobile Co. at Terre Haute, Ind., has been named distributor in that section of Indiana for the Columbia Six and the Lexington Six.

Hilmer Motor Co. has been organized at Springfield, Ill., and will distribute Briscoe cars in the Sangamon County territory. J. E. Hilmer is president of the new company.

A. M. Gibbes of Gibbes Machinery Co., Columbia, S. C., distributor for Paige and Packard, has taken over the distribution of the new Durant car in South Carolina, except for a few counties.

Noyes Buick Co., Springfield, Mass., has filed with the Building Department plans for a large automobile salesroom and service station to cost \$100,000. The building will be 100 by 185 ft., one story high.

D. S. Neill, who has been in charge of car distribution in the sales department of the Buick Motor Co. for four years, has resigned to become Buick dealer in Baltimore. Neill will leave Detroit this week for his new assignment.

Weatherall & Sehler, Grand Rapids, Mich., have been named distributors for western Michigan of Columbia cars. The firm is composed of R. J. Weatherall and Roland Sehler. A. C. Velten, Jr., has been appointed sales manager.

Russell H. Lawson Automobile Co. of Portland, Ore., was recently named distributor for the Columbia Six by the Columbia Motor Car Co. of Detroit, and received a consignment of the new "Challenger" model Columbias last week, which attracted interest along Portland's automobile row.

A. E. Braden, formerly of Cleveland, later of Shreveport, La., has been added to the forces of the S. G. Davis Motor Co., Dallas, Tex., distributors for the Oldsmobile. Braden will have charge of the East Texas territory and will immediately begin to build up agencies in that section of the state.

R. K. Wysong of Michigan City, Ind., has been named state distributor for the National Tire Stores, Inc., a Delaware corporation which is qualified to do business in Indiana. The total of \$10,000 of the company's capital stock is represented in this state. The company deals in rubber tires and auto accessories.

Marmon Sales Co., Lexington, Ky., has been made distributors for Marmon automobiles, formerly handled by W. M. Phillips & Co. The new company will maintain a showroom with the Phillips company and conduct a service station in the new building in the rear. W. M. Phillips & Co. will continue to handle the Franklin car.

Joe M. Dine has been appointed general sales manager of the Madison Tire & Rubber Co., New York, in place of J. C. Matlack, resigned. Dine recently resigned as vice-president and general manager of the Oldfield Tire Co. During the past fifteen years Dine has held important positions with two of the largest tire companies in Akron.

R. R. Scott, Indianapolis, Ind., formerly with the Goodyear Tire Co. as branch manager at Denver and Atlanta, will be secretary-treasurer of a new organization to be known as the Capital Fence Co. H. E. Harvey, for several years a tractor distributor with the International Harvester Co., will be president of the organization.

Thayer Morrow, Bloomington, Ill., distributor of the Ford car and Fordson tractor in the central Illinois territory, has retired to engage in the automotive business elsewhere. He succeeded Dayton Keith when the latter moved to Chicago to become distributor for the Wills-St. Claire car. The successor of Morrow will be announced soon.

Charles C. Fagan Co., distributor of Pierce Arrow automobiles throughout the Portland, Ore., territory, has been appointed representative in this district for the new Wills-St. Claire. The first shipment of the cars is now en route and will arrive in Portland about the first of September. The Portland concern will cover Oregon and the southern part of Washington for the car.

Seagraves & Co. have become sole agents for the Pierce Arrow cars in Bridgeport, succeeding the Westernfield Co., which formerly had the agency. In connection with the agency a modernly equipped garage and service station will be conducted. The company will continue to handle the Sheridan car, for which Seagraves has been local agent for a considerable period.

Cox Motor Sales Co., Dallas, Tex., distributors for the Haynes car in North Texas, is reorganizing. The capital stock will be increased from \$75,000 to \$125,000, according to Homer J. Cox, president. In addition to handling the Haynes and increasing the number of agents over North Texas, the company will handle tires, accessories and Haynes parts. A gasoline station and service station at the Dallas plant will be maintained.

Pacific Nash Motor Co. has effected changes in its Fresno and Oakland branches. In Fresno, Roy K. Dorr, who for the past year has served as manager, has acquired, with Charles Tate, formerly manager of the Oakland branch, a half interest in the business. This meets the need of the Pacific Nash Co. in the expansion that has been experienced since the acquisition of the LaFayette line coupled with the unusually heavy demand for the Nash Four and Nash Six.

Laster Reo Co., Des Moines, Iowa, has contracted for twenty counties in central Iowa. The Sears Automobile Co., the oldest dealer's firm in the state, has distributed the Reo for years, along with the Dodge and one or two other lines. The exclusive policy of Dodge Brothers Co. is said to be the real basis of the Sears company giving up Reo. The Sears company also recently gave up the Jordan and will handle Dodge exclusively. The Laster Reo Co. is a new concern, although members of the firm have been associated with well established concerns.

Maxwell Motor Corp. has elected B. E. Hutchinson as treasurer. Hutchinson has previously been connected with the American Writing Paper Co., Holyoke, Mass., and has held numerous offices with commercial and political organizations, the positions including those of vice-president and executive committee member of Chicago Association of Commerce, councillor for Chicago to Chamber of Commerce of the United States, member traffic committee Illinois Manufacturers Association, member political action committee Illinois Manufacturers Association, director Holyoke Chamber of Commerce, president Holyoke Chamber of Commerce, director Republican League of Massachusetts, vice-president and executive committee Cost Association of Paper Industry.

STEVENS-DURYEA CUTS PRICE OF FOUR MODELS

2-Passenger Drops from \$8,500 to \$7,250—Sedan Is Reduced \$500

NEW YORK, Aug. 27—Stevens-Duryea, Inc., has announced a price cut on the following models:

Name of Car	Old Price	New Price
Two passenger.....	\$8,500	\$7,250
Four passenger.....	8,000	6,900
Seven passenger.....	8,000	6,800
Sedan, 4 passenger...	9,500	9,000

PEERLESS MOTOR CUTS PRICE ON FOUR MODELS

DETROIT, Aug. 26—Peerless Motor Car Co. of Cleveland has reduced prices \$100 to \$180:

	Old Price	New Price
Touring	\$2,990	\$2,880
Roadster	2,990	2,880
Coupe	3,600	3,500
Sedan	3,950	3,790

NOMA MOTOR REDUCES PRICE ON FOUR MODELS

NEW YORK, Aug. 27—Noma Motor Corp. announces price cuts as follows:

	Old Price	New Price
2 passenger.....	\$3,000	\$2,800
4 passenger.....	3,200	2,850
6 passenger.....	3,500	3,200
Sedan	4,350	3,700

No changes have been made in specifications.

MERCER MOTORS CUTS PRICE OF ALL MODELS

TRENTON, N. J., Aug. 25—Mercer Motors Co. announces price cuts on all models. The new prices follow: Sportabout, touring, runabout and raceabout, \$3950; touring limousine, \$5650; coupe, \$5150.

In explaining these price changes, the new management which recently took over Mercer affairs, states that it is made largely possible by the savings effected through the operation of the company's affairs entirely at the factory instead of through Hare's Motors, as formerly.

It will be recalled that Mercer prices were increased by Hare's Motors last March, and this reduction carries the list back to where it was prior to the increase.

Harvey Trucks Cut

HARVEY, ILL., Aug. 27—Harvey Motor Truck Co. has cut the prices on its 3½-ton truck to \$3,950 and its 5-ton truck to \$4,500.

Eugol Truck in Chicago

CHICAGO, Aug. 27—The Eugol Motor Truck Co. has established offices in this city and has a factory in Kenosha, Wis., for the manufacture of a speed truck which will be assembled largely of standard units.

COMING EVENTS

SHOWS

Toronto, Can.	Aug. 27	Canadian National Automobile Show.
Milwaukee	Aug. 29-Sept. 3	Annual Fall Automobile Show at Wisconsin State Fair, Milwaukee Automobile Dealers Association.
Indianapolis	Sept. 5-10	Automobile and Accessory Show in conjunction with Indiana State Fair, conducted by Indianapolis Automotive Trade Ass'n, John B. Orman, Mgr.
Ottawa, Ont.	Sept. 9 to 17	Ottawa Motor Show.
Cincinnati	Oct. 1-8	Fall Automobile Show, Cincinnati Automotive Dealers' Ass'n, Music Hall.
Pittsburgh	Oct. 15-22	Fall Show under auspices of Automotive Association.
Jersey City	Nov. 14-19	Second Annual Automobile Show, Hudson County Automobile Trade Association, Fourth Regiment Armory.
New York	Nov. 27-Dec. 3	Automobile Salon, Hotel Commodore.
Chicago	January	Automobile Salon, Drake Hotel.
New York	Jan. 7-13	National Automobile Show, under auspices of National Automobile Chamber of Commerce, Madison Square Garden.
Louisville, Ky.	Feb. 20 to 25	Louisville Automobile Show, auspices Louisville Automobile Dealers' Association.

Chicago	Jan. 28-Feb. 3, 1922	National Automobile Show, under auspices of National Automobile Chamber of Commerce, Coliseum.
Winnipeg	Feb. 6-11, 1922	Automobile Equipment Show, Western Canada Automotive Association.
Santiago, Cuba	March, 1922	Annual Automobile Show.
Rio de Janeiro, Brazil	Sept., 1922	Automotive Exhibition in connection with Brazilian Centenary.

RACES

Uniontown, Pa.	Labor Day	Autumn Classic.
Los Angeles	Nov. 24	Speedway Events.

CONVENTIONS

Chicago	Oct. 12-14	National Implement & Vehicle Association Convention, Congress Hotel.
Chicago	Nov. 14-19	Annual Meeting and Business Exhibit of Automotive Equipment Association.
New York City	Nov. 22-24	Semi-Annual Convention of Factory Service Managers, N. A. C. C., H. R. Cobleigh, Secretary.

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Lone Star (1½ ton)	Oct. 27, 1920-30
Lorain (2 ton)	Sept. 1, 1920-30
Mack (double red, axles)	Jan. 5, 1921-33
Moline farm truck (1½ ton)	Nov. 10, 1920-36
Pierce-Arrow (2 ton x 5, 3½ ton, W-2; 5 ton, r-10)	Sept. 8, 1920-30
Rainier (3½ & 5 ton)	Jan. 12, 1921-31
Republic (½ ton)	July 20, 1921-33
Republic Express, Model 10	Mar. 30, 1921-31
Rumely (1½ ton)	Nov. 10, 1920-36
Service Speed Wagon (1 ton)	Feb. 16, 1921-32
Standard 5-K (5 ton)	Apr. 13, 1921-33
Stoughton (1 ton)	Feb. 23, 1921-33
Stoughton (1½, 2 & 3 ton)	Aug. 25, 1920-33
Transport (3½ ton)	Nov. 3, 1920-31
Ward La France (5 ton)	Jan. 12, 1921-30
Winther	Feb. 2, 1921-11

PRE-HARVEST SLUMP FELT IN NORTHERN CALIFORNIA

SACRAMENTO, CAL., Aug. 27—The usual pre-harvest slump in automobile sales is noted in northern California, but dealers, far from worrying over the outlook, are preparing for an autumn business which they predict will be the biggest they have known. In this territory, which is almost entirely agricultural, the climax of the year's business is at hand,

and there are not as many who have time to examine cars now or to look into purchasing deals. The record of car sales at the offices of the Motor Vehicle Department, shows a decrease of about 50 per cent in new car sales for the week.

With the arrivals of the state, district and county fairs, with their attendant shows and the end of the harvest rush, buying is expected to begin again, and in earnest.

KELSEY DEALERS HOLD CONVENTION IN NEWARK

NEWARK, N. J., Aug. 29—Dealers handling the Kelsey six friction-drive car came here from all over the country to hold a 2-day convention and outing. Numbering, with their wives, more than 200, the Kelsey men made the plant of the Kelsey Motor Co. their headquarters. A business session, inspection of the plant and a dinner were held.

Specifications of Current Passenger Car Models

NAME AND MODEL	Eng- ine Make	Cylinders, Bore and Stroke	WB	Tires	2- Pass.	5- Pass.	7- Pass.	Coupe	Sedan	NAME AND MODEL	Eng- ine Make	Cylinders, Bore and Stroke	WB	Tires	2- Pass.	5- Pass.	7- Pass.	Coupe	Sedan
Ace.....G	Guy	6-31x5	123	32x4	\$2975	\$2975	.....	\$3680	\$3680	Maibohm.....B	Falls	6-31x4 1/2	116	32x4	\$1575	\$1575	\$1575	\$2395	\$2395
Ace.....H	H-S.	6-31x5	123	32x4	2975	2975	.....	3680	3680	Marmont.....34	Ow.	6-31x5 1/2	136	32x4 1/2	4185	3985	3985	4875	5275
Ace.....L	H-S.	4-31x5	116	32x4	2260	2260	.....	.....	.....	Maxwell.....25	Ow.	4-31x4 1/2	109	30x3 1/2	845	845	.....	1445	1545
Allen.....Series 43	Ow.	4-31x5	110	32x4	\$1385	1385	.....	2195	2195	McFarlan.....1921	Ow.	6-41x6	140	33x5	6300	6300	6300	7500	7500
Ambassador.....R	Cont.	6-31x5 1/2	136	33x5	.....	\$4500	.....	6500	6500	Mercer.....Series 5	Ow.	4-31x6 1/2	132	32x4 1/2	4500	4500	4500	5700	6200
American.....C	H-S.	6-31x5	127	32x4	2195	2195	2350	3150	3150	Merit.....Cont.	Ow.	6-31x4 1/2	119	32x4	2245	2245	.....	.....	.....
Anderson.....Series 40	Cont.	6-31x5 1/2	120	32x4	2195	1845	2795	2795	2795	Meteor.....R & RR	Dues.	4-41x6	129	32x4 1/2	5500	5500	.....	.....	.....
Apperson.....8-21-S	Ow.	8-31x5	130	34x4 1/2	.....	3000	3250	4500	4500	Metz.....M6	Rut.	6-31x5	120	32x4	1995	1995	.....	2795	2895
Apperson.....Anniversary	Ow.	8-31x5	130	34x4 1/2	.....	3500	3750	.....	.....	Mitchell.....F-40	Ow.	6-31x5	120	33x4	1490	1490	.....	2590	2690
Auburn.....6-51	Cont.	6-31x4 1/2	121	32x4	1670	1695	1760	2475	2495	Mitchell.....F-42	Ow.	6-31x5	127	33x4	.....	1795	.....	.....	.....
Beggs.....20T	Cont.	6-31x4 1/2	120	33x4	1775	1775	.....	2675	2775	Moller.....A	Ow.	4-21x4	100	27x3 1/2	2000	.....	.....	.....	.....
Bell.....4-32	H-S.	4-31x5	114	31x4	.....	1495	.....	.....	.....	Monroe.....S-9 & 10	Ow.	4-31x4 1/2	115	32x3 1/2	1255	1255	.....	.....	.....
Bell.....6-50	H-S.	6-31x5	124	32x4	.....	1695	.....	.....	.....	Monroe.....S-11 & 12	Ow.	4-31x4 1/2	115	33x4	.....	.....	2075	2175	.....
Biddle.....B1	Buda.	4-31x5 1/2	121	32x4	3475	3475	.....	3975	3975	Monroe.....6-48	Cont.	6-31x4 1/2	122	32x4	1985	1985	2485	2985	.....
Birch Super-Four.....	H-S.	4-31x5	117	33x4	1195	1195	1245	2295	1795	Moore.....6-68	Cont.	6-31x5 1/2	125	33x4 1/2	.....	2485	.....	3485	.....
Birch Light Four.....	LeR.	4-31x4 1/2	108	30x3 1/2	1045	1045	.....	.....	.....	Murray-Mac Six.....	Ow.	6-31x5 1/2	128	34x4 1/2	4250	4250	4250	.....	.....
Birch Light Six.....	H-S.	6-31x5	117	33x4	1395	1395	1445	1995	1995	Nash.....681-7	Ow.	6-31x5	121	33x4	1525	1545	1695	2395	2695
Bour-Davis.....21S	Cont.	6-31x5 1/2	126	33x4 1/2	2385	2385	.....	.....	.....	Nash.....682	Ow.	6-31x5	127	34x4 1/2	.....	1695	.....	.....	.....
Brewster.....91	Ow.	4-4 x5 1/2	125	32x4 1/2	17000	7000	.....	10500	10500	Nash Four.....41-4	Ow.	4-31x5	112	32x3 1/2	1175	1195	.....	1735	1935
Briscoe.....4-34	Ow.	4-31x5	109	31x4	1085	1085	.....	1685	1685	National Sextet.....BB	Ow.	6-31x5 1/2	130	32x4 1/2	2990	2990	2990	3990	3990
Brook.....S-21 A	Ow.	2-31x3 3/8	90	28x3	395	395	.....	.....	.....	Nelson.....D	Cont.	4-31x4 1/2	104	32x4	.....	1750	.....	.....	.....
Buick.....1922-31-35-37	Ow.	6-31x4 1/2	109	31x4	935	975	.....	1475	1650	Noma.....1C	Ow.	6-31x4 1/2	128	32x4 1/2	3000	3200	.....	4450	.....
Buick.....1922-44-5-6-7	Ow.	6-31x4 1/2	118	33-4 1/2	1495	1525	.....	2135	2435	Northway.....	Ow.	6-31x5 1/2	128	33x5	4200	4200	6000	5600	5400
Buick.....1922-48-9-50	Ow.	6-31x4 1/2	124	34x4 1/2	.....	.....	1735	2325	2635	Northwalk.....430-KS	Lyc.	4-31x5	116	32x4	.....	1035	.....	.....	.....
Bush.....E.C.A	Lyc.	4-31x5	116	33x4	.....	1195	.....	.....	.....	Oakland.....34-C	Ow.	6-24x4 1/2	115	32x4	1095	1195	1265	1625	1725
Bush.....E.C.6	Rut.	4-31x5	116	34x4 1/2	3790	3790	.....	1750	1850	Ogren.....6-60	Ow.	6-31x5 1/2	134	33x5	3850	3750	3900	5000	5400
Cadillac.....59	Ow.	8-31x5 1/2	132	35x5	.....	.....	3940	.....	5190	Oldsmobile.....43-A	Ow.	4-31x5 1/2	115	32x4	1325	1345	.....	1895	2100
Carroll.....C	Roche.	6-31x5	128	32x4 1/2	3185	3185	.....	.....	.....	Oldsmobile.....37-A	Ow.	6-24x4 1/2	112	32x4	1450	1450	.....	2145	2145
Case.....V	Cont.	6-31x5 1/2	126	34x4 1/2	.....	2250	2250	2900	3285	Oldsmobile.....46	Ow.	8-27x4 1/2	122	33x4 1/2	.....	1875	.....	2775	.....
Chalmers.....6-30	Ow.	6-31x4 1/2	117	32x4	1495	1545	.....	2295	2445	Oldsmobile.....47	Ow.	8-27x4 1/2	115	32x4	.....	1725	.....	2225	2425
Chalmers.....6-30	Ow.	6-31x4 1/2	122	33x4 1/2	.....	.....	1795	.....	.....	Overland.....4	Ow.	4-31x4	100	30x3 1/2	695	695	.....	1000	1275
Champion.....Tourist	Lyc.	4-31x5	113	32x3 1/2	.....	1095	.....	.....	.....	Packard.....Single-Six	Ow.	6-31x4 1/2	116	33x4 1/2	2975	2975	.....	3650	3975
Champion.....Special	H-S.	4-31x5	118	32x4	1395	1395	.....	.....	.....	Packard.....Twin-Six	Ow.	12-3 x5	136	35x5	4850	4850	4850	6600	6800
Chandler.....Six	Ow.	6-31x5	123	33x4	1785	1785	.....	2785	2885	Paige.....6-42	Ow.	6-31x5	119	32x4	1635	1635	.....	2450	2570
Chevrolet.....490	Ow.	4-31x4	102	30x3 1/2	625	625	.....	975	975	Paige.....6-46	Cont.	6-31x5	131	33x4 1/2	2975	3295	2875	3755	3850
Chevrolet.....FB	Ow.	4-31x4 1/2	110	33x4	975	975	.....	1575	1575	Pan American E&F-6-55	H-S.	6-31x5	121	33x4	2000	2000	2100	.....	.....
Cleveland.....40	Ow.	6-3 x5 1/2	112	32x4	1295	1295	.....	2195	2295	Parenti.....1921	Ow.	8-23x4 1/2	125	32x4	2000	2000	.....	3000	.....
Climber Four.....	H-S.	4-31x5	115	33x4	1450	1385	.....	.....	.....	Patterson.....650	Ow.	6-31x4 1/2	120	33x4	.....	1595	1625	2865	2865
Climber Six.....S	H-S.	6-31x5	125 1/2	32x4 1/2	2250	2250	.....	.....	.....	Petters.....56-S-7	Ow.	8-31x5	125	34x4 1/2	.....	2990	2990	3680	3680
Cole.....870	Nort.	8-31x4 1/2	127	33x5	2550	2695	2795	3695	3995	Peters.....C	Ow.	2-31x3 3/8	90	28x3	385	.....	.....	.....	.....
Columbia Challenger.....	Rut.	6-31x5	115	32x4	.....	1195	.....	1995	1995	Piedmont.....4-36	Lyc.	4-31x5	116	32x3 1/2	.....	970	.....	.....	.....
Columbia.....D-C&CS	Cont.	6-31x4 1/2	115	32x4	1475	1475	1475	2295	2350	Piedmont.....6-40	Cont.	6-31x4 1/2	122	32x4	.....	1255	.....	.....	.....
Comet.....C-53	Ow.	6-31x5 1/2	125	33x4 1/2	.....	2350	2450	.....	3650	Pierce-Arrow.....	Ow.	6-4 x5 1/2	138	33x5	7000	6500	6500	8500	8500
Commonwealth.....44	H-S.	4-31x5	117	32x4	.....	1395	.....	2465	2465	Pilot.....6-45	Teetor	6-31x5	120	33x4	1945	1945	.....	.....	.....
Crawford.....21-6-40	Cont.	6-31x5 1/2	122 1/2	32x4	3000	3000	3000	4500	4500	Pilot.....6-50	H-S.	6-31x5	126	33x4 1/2	2285	2285	2325	3350	3400
Crow-Elkhart.....L63-65	Lyc.	4-31x5	117	32x3 1/2	1295	1295	.....	.....	.....	Porter.....40	Ow.	4-4 x6 1/2	142	35x5	6750	Chassis Price	.....	.....	.....
Crow-Elkhart.....L63-65	H-S.	6-31x5	117	33x4	11545	11545	.....	2395	2395	Premier.....6-D	Ow.	6-31x5 1/2	126 1/2	33x5	3790	3690	3890	4690	5190
Daniels.....D-19	Ow.	8-31x5 1/2	132	34x4 1/2	5350	5350	5350	6250	6950	Premocor.....6-40 A	Falls	6-31x4 1/2	117	33x4	1295	1295	.....	.....	.....
Davis.....61-67	Cont.	6-31x4 1/2	120	32x4	1995	1895	1995	2795	2795	Raleigh.....A-6-60	H-S.	6-31x5	122	32x4 1/2	2250	2250	.....	3100	3200
Dispatch.....	Wise.	4-31x5	120	34x4	1250	1350	1525	1575	1575	R & V Knight.....R	Ow.	4-31x5	116	32x4	.....	2150	.....	2850	2950
Dixie Flyer.....H-S-70	H-S.	4-31x5	112	32x4	1445	1445	1945	2295	2345	R & V Knight.....J	Ow.	6-31x4 1/2	127	32x4 1/2	3350	3350	3350	4000	4200
Dodge Brothers.....	Ow.	4-31x4 1/2	114	32x4	935	985	.....	1585	1785	Reo.....T-6	Ow.	6-31x5	120	33x4	1650	1650	.....	2700	2750
Doris.....6-80	Ow.	6-4 x5	132	33x5	.....	4785	4785	5800	6690	Revere.....C	Dues.	4-41x6	131	32x4 1/2	4850	4650	4650	.....	6500
Dort.....17-12	D-Ly.	4-31x5	108	31x4	985	985	.....	1535	1685	Rosmer.....6-54-E	Ow.	6-31x5 1/2	128	32x4 1/2	3150	3150	3250	3985	4100
Driggs.....	Ow.	4-29x4 1/2	104	30x3 1/2	1275	1275	.....	1975	1975	Romer.....4-75-E	Dues.	4-41x6	128	32x4 1/2	4150	3985	.....	.....	.....
Dupont.....A	Ow.	4-3 x5 1/2	124	32x4 1/2	3400	3400	.....	4900	4900	Rolls-Royce.....	Ow.	6-41x4 1/2	143 1/2	33x5	.....	U. S. Chassis Price	11750	.....	.....
Durant.....A-22	Cont.	4-31x4 1/2	109	31x4	.....	890	.....	1365	1365	Romer.....Cont.	Ow.	6-31x4 1/2	120	33x4	2000	2000	2100	2450	2750
Elcar.....K-4	Lyc.	4-31x5	117	33x4	1195	1195	.....	.....	.....	Saxon.....125	Ow.	4-31x5	112	32x4	1545	1495	.....	2295	2295
Elcar.....7-R	Cont.	117	33x4	1595	1595	1195	2395	2495	.....	Sayers Six.....DP	Cont.	6-31x4 1/2	118	33x4	2145	1945	.....	2995	.....
Elgin.....K-1	Falls.	6-31x4 1/2	118	33x4	1595	1495	1595	2395	2395	Scripps-Booth.....B-39-42	Nort.	6-24x4 1/2	115	32x4	1275	1295	.....	1950	2100
Essex.....	Ow.	6-31x5	108 1/2	32x4	1375	1375	.....	1880	2230	Scripps-Booth.....F-43-46	Cont.	6-31x4 1/2	115	32x4	1470	1490	.....	2350	2375
Fergus.....S-5-21	Ow.	6-31x5	126	33x4 1/2	.....	Chassis Price	8500	.....	.....	Seneca.....L & O	LeR.	4-31x4 1/2	108	30x3 1/2	1045	1045	.....	.....	.....
Ferris.....C-20	Cont.	6-31x5 1/2	130	32x4 1/2	2695	2695	.....	3675	3675	Severin.....Six	Cont.	6-31x5 1/2	122 1/2	33x4 1/2	1485	1485	.....	2100	2250
Ford.....T	Ow.	4-31x4	100	30x3 1/2	370	370	.....	695	760	Severin.....Six	Cont.	6-31x5 1/2	122 1/2	33x5	2550	2550	2550	3250	3350
Franklin.....9-B	Ow.	6-31x4	115	32x4	2550	2550	2550	2850	3650	Skelton.....35	Lyc.	4-31x5	112	32x3 1/2	995	995	.....	.....	.....
Friend.....Four	Ow.	4-31x4																	

Specifications of Current Motor Truck Models

NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive
				Front	Rear						Front	Rear						Front	Rear	
Acadon	1 1/2	\$1650	3 1/2 x 5	34x5 1/2	34x5 1/2	W	Cook, 41	2	\$3000	4 x 5 1/2	36x6 1/2	38x7 1/2	1	Gary, F	1	\$2100	3 1/2 x 5	36x3 1/2	36x4	W
Acadon, R	1 1/2	2260	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Corbett, H	1 1/2	1800	3 1/2 x 5	35x5 1/2	35x5 1/2	B	Gary, I	1 1/2	2550	4 x 5 1/2	36x3 1/2	36x5	W
Acadon, RB	1 1/2	2485	3 1/2 x 5 1/2	36x3 1/2	36x6	W	Corbett, E	1	2200	3 1/2 x 5	34x3 1/2	34x4	W	Gary, J	2 1/2	3150	4 1/2 x 5 1/2	36x4	36x7	W
Acadon, H	2 1/2	3295	4 1/2 x 5 1/2	36x4	36x8	W	Corbett, D	1 1/2	2600	3 1/2 x 5	36x3 1/2	36x5	W	Gary, K	3 1/2	4050	4 1/2 x 6	36x5	40x5d	W
Acadon, L	3 1/2	4295	4 1/2 x 5 1/2	36x5	36x10	W	Corbett, C	2	3150	4 1/2 x 5 1/2	36x3 1/2	36x7	W	Gary, M	5	5150	5 x 6 1/2	36x6	40x6d	W
Acadon, M	5	5250	5 x 6 1/2	36x6	40x12	W	Corbett, B	2 1/2	3300	4 1/2 x 5 1/2	36x4	36x7	W	Gersis M	1 1/2	3100	4 x 5 1/2	36x3 1/2	36x7	W
Acc, C	1 1/2	2295	3 1/2 x 5	34x3 1/2	34x5	W	Corbett, A	3 1/2	4100	4 1/2 x 5 1/2	36x5	36x10	W	Gersis K	2 1/2	3500	4 1/2 x 5 1/2	36x4	36x8	W
Acc, A	2 1/2	2795	4 1/2 x 5 1/2	36x4	36x7	W	Cyclone, AA	5	5000	4 1/2 x 6	36x6	40x6d	W	Gersis	3 1/2	4500	4 1/2 x 5 1/2	36x5	40x12	W
Accme, G	3 1/2	...	3 1/2 x 5	35x5 1/2	35x5 1/2	W	Cyclone, A	1 1/2	2685	3 1/2 x 5	34x5 1/2	36x7	W	Giant, 15-A	1 1/2	2250	3 1/2 x 5	34x3 1/2	34x5	W
Accme, B	1	...	3 1/2 x 5	34x3 1/2	34x5	W	Dart, S	1 1/2	...	3 1/2 x 5	34x3 1/2	34x6	W	Giant, 16	2	3050	4 1/2 x 5 1/2	36x4	36x7	W
Accme, F	1 1/2	...	3 1/2 x 5	34x3 1/2	34x5	W	Dart, M	2 1/2	...	4 1/2 x 5 1/2	36x4	36x7	W	Giant, 17	3 1/2	4150	4 1/2 x 5 1/2	36x5	36x5d	W
Accme, A	2	...	4 1/2 x 5 1/2	36x4	36x7	W	Day-Elder, A	1	2100	3 1/2 x 5	34x3 1/2	34x4	W	Globe D-20	1 1/2	1495	3 1/2 x 5	33x4 1/2	33x4 1/2	B
Accme, AC	2 1/2	...	4 1/2 x 5 1/2	36x5	40x10	W	Day-Elder, B	1 1/2	2300	3 1/2 x 5	34x3 1/2	34x5	W	Globe	1	1495	3 1/2 x 5	33x5	33x5	B
Accme, C	3 1/2	...	4 1/2 x 5 1/2	36x5	40x12	W	Day-Elder, D	2	2750	4 1/2 x 5 1/2	36x4	36x7	W	Golden West, GH	3 1/2	5000	4 1/2 x 5 1/2	36x6	36x7	W
Accme, E	5	...	4 1/2 x 6	36x6	40x12	W	Day-Elder, F	3 1/2	3750	4 1/2 x 5 1/2	36x5	36x5d	W	Golden West, G	3 1/2-4	4500	4 1/2 x 6	36x6	36x6	W
Ahr-Multi-Trk-20	3 1/2	1905	4 x 5 1/2	34x5	34x5	B	Day-Elder, E	5	4250	4 1/2 x 6	36x5	40x6d	W	Golden West, T	4	5000	4 1/2 x 6	36x6	36x6	W
Alh-Power, C	3 1/2	5800	4 1/2 x 6	36x7	36x10	W	Dearborn, E	1	1700	3 1/2 x 5 1/2	35x5 1/2	35x5 1/2	W	Golden West, HA	7	6000	4 1/2 x 6	36x6	36x6	W
Alh-American, B-1	1 1/2	1795	3 1/2 x 5	32x4	32x4	W	Dearborn, FX	1 1/2	2300	3 1/2 x 5 1/2	34x4	34x5	W	Gova, A-1	2 1/2	2495	3 1/2 x 5	36x4	36x10	I
Alh-American, C-1	1 1/2	2195	3 1/2 x 5	34x4	34x5	W	Dearborn, 48	1 1/2	2180	3 1/2 x 5 1/2	34x4	34x5	W	Graham Bros. A	1 1/2	1495	3 1/2 x 5	35x5 1/2	35x5 1/2	I
American, 25	2 1/2	3350	4 x 6	36x4	36x4d	W	Defiance, G	1	1975	3 1/2 x 5	35x5 1/2	35x5 1/2	W	Graham-Bern, 10	1 1/2	2050	3 1/2 x 5	33x5 1/2	33x5 1/2	I
American, 40	4	4275	4 1/2 x 6	36x5	36x5d	W	Defiance, D	1 1/2	2550	3 1/2 x 5	35x5 1/2	36x7	W	Graham-Bern, 65	1 1/2	2725	3 1/2 x 5	36x3 1/2	36x5	W
Apez, G	1	1450	3 1/2 x 5	32x5 1/2	32x5 1/2	W	Defiance, E	2	2750	3 1/2 x 5	35x5 1/2	36x7	W	Graham-Bern, 20	2 1/2	3175	4 1/2 x 5 1/2	36x4	36x7	W
Apez, D	1 1/2	1915	3 1/2 x 5	34x3 1/2	34x4	W	DeKalb, E2 1/2	2 1/2	2600	4 1/2 x 5 1/2	36x4	36x5	W	Graham-Bern, 25	2 1/2	3575	4 1/2 x 5 1/2	36x4	36x7d	W
Apez, E	2 1/2	2605	4 1/2 x 5 1/2	36x4	36x7	W	DeKalb, E2	2 1/2	2250	4 1/2 x 5 1/2	36x4	36x5	W	Graham-Bern, 35	3 1/2	4375	4 1/2 x 5 1/2	36x5	40x5d	W
Apez, F	3 1/2	3975	4 1/2 x 6	36x5	36x10	W	DeMartini 1 1/2	1 1/2	2600	3 1/2 x 5 1/2	34x3 1/2	34x6	W	Graham-Bern, 50	5	5275	4 1/2 x 6	36x6	40x6d	W
Armador, 20	1	...	3 1/2 x 5 1/2	34x3 1/2	34x5	W	DeMartini 2	2	3300	4 x 5 1/2	36x4	36x7	W	Hahn, J	1	...	3 1/2 x 5	34x5	34x5	W
Armador, HW	2 1/2	...	4 1/2 x 5 1/2	36x4	36x7	W	DeMartini 3	3	4250	4 1/2 x 5 1/2	36x4	36x5	W	Hahn, CD	1 1/2	...	4 1/2 x 5 1/2	36x3 1/2	36x6	W
Armador, KW	3 1/2	...	4 1/2 x 5 1/2	36x5	36x5d	W	DeMartini 4	4	4800	4 1/2 x 6	36x5	36x12	W	Hahn, EE	2 1/2	...	4 1/2 x 5 1/2	36x4	36x8	W
Atco, B	1 1/2	...	3 1/2 x 5	34x3 1/2	34x5	W	Denny, 31	3 1/2	1625	3 1/2 x 5	35x5	35x5	B	Hahn, F	3 1/2	...	4 1/2 x 5 1/2	36x5	36x10	W
Atco, B1	1 1/2	...	3 1/2 x 5	34x3 1/2	34x5	W	Denny, 33	1 1/2	2300	3 1/2 x 5	35x5 1/2	35x7 1/2	W	Hahn, EF	6	...	4 1/2 x 6	36x6	40x12	W
Atco, A	2 1/2	...	4 1/2 x 5 1/2	36x4	36x8	W	Denny, 34	2	2600	3 1/2 x 5	36x3 1/2	36x6	W	Hal Fur, E	1	2350	4 x 6	35x5 1/2	35x5 1/2	W
Atlas, M.D	1	...	3 1/2 x 5	32x4 1/2	32x4 1/2	W	Denny, 25	3	3300	4 1/2 x 5 1/2	36x4	36x7	W	Hal Fur, F	2 1/2	3250	4 1/2 x 5 1/2	35x5	38x7	W
Atterbury, 20R	1 1/2	2775	3 1/2 x 5	34x3 1/2	34x5	W	Denny, 27	4	4200	4 1/2 x 5 1/2	36x5	36x5d	W	Hall	1 1/2	3100	3 1/2 x 5	34x5 1/2	34x7	W
Atterbury, 7CX	2 1/2	3375	4 1/2 x 5 1/2	36x4	36x4d	W	Denny, 210	5 1/2	4850	4 1/2 x 5 1/2	36x6	40x6d	W	Hall	2 1/2	3275	4 1/2 x 5 1/2	36x4	36x6	W
Atterbury, 7D	3 1/2	4175	4 1/2 x 5 1/2	36x5	40x5d	W	Dependable, A	5 1/2	1650	3 1/2 x 5 1/2	34x5	36x6	W	Hall	3 1/2	4100	4 1/2 x 5 1/2	36x5	36x5d	W
Atterbury, 8E	5	5575	4 1/2 x 6	36x6	40x6d	W	Dependable, C	1 1/2	2350	3 1/2 x 5 1/2	34x3 1/2	34x5	W	Hall	5	5100	4 1/2 x 5 1/2	36x5	40x6d	W
Autocar, 21UF	1 1/2-2	2300	4 1/2 x 5 1/2	34x4	34x5	D	Dependable, D	2	2650	4 x 5 1/2	34x5	36x6	W	Hall	7	5100	4 1/2 x 5 1/2	36x5	40x6d	C
Autocar, 21UG	1 1/2-2	2400	4 1/2 x 5 1/2	34x4	34x5	D	Dependable, E	2 1/2	2950	4 1/2 x 5 1/2	36x4	36x7	W	Harvey, WEA	1 1/2	2550	4 1/2 x 5 1/2	34x3 1/2	34x5	W
Autocar, 26-B	...	4350	4 1/2 x 5 1/2	34x5	36x10	D	Dependable, G	3 1/2	3550	4 1/2 x 6	36x6	38x7	W	Harvey, WFA	2 1/2	2950	4 1/2 x 5 1/2	34x4	34x7	W
Available, H1 1/2	1 1/2	2475	4 x 5 1/2	36x3 1/2	36x5	W	Diamond-T, O	1	2500	3 1/2 x 5 1/2	34x5 1/2	36x5	W	Harvey, WFA	3 1/2	3300	4 1/2 x 5 1/2	36x4	36x7	W
Available, H2 1/2	2 1/2	2775	4 x 5 1/2	36x4	36x8	W	Diamond-T, FS	1 1/2	2960	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Harvey, WFA	5	4500	4 1/2 x 6	36x5	36x5d	W
Available, H3 1/2	3 1/2	3475	4 1/2 x 5 1/2	36x5	40x5d	W	Diamond-T, T	1 1/2	2650	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Hawkeye, K	1 1/2	1850	3 1/2 x 5	34x3 1/2	34x5	W
Available, H5	5	5375	4 1/2 x 6	36x6	40x12	W	Diamond-T, U	2	3285	4 x 5 1/2	36x4	36x7	W	Hawkeye, M	2	2650	4 1/2 x 5 1/2	36x4	36x6	W
Available, H7	7	6000	5 x 6	36x6	40x14	B	Diamond-T, K	3 1/2	4675	4 1/2 x 5 1/2	36x5	36x5d	W	Hawkeye, N	3 1/2	3700	4 1/2 x 6	36x5	36x10	W
Avery	1	...	3 x 4	34x5 1/2	34x5 1/2	W	Diamond-T, EL	5	5400	4 1/2 x 5 1/2	36x6	40x6d	W	Hendrickson, N	2 1/2	3150	4 1/2 x 5 1/2	36x4	36x7	W
Beck, A. Jr.	2	1800	3 1/2 x 5	34x3 1/2	34x4	W	Diamond-T, S	5	5650	4 1/2 x 6	36x6	40x6d	W	Hendrickson, M	3 1/2	3975	4 1/2 x 5 1/2	36x5	36x5d	W
Beck, C	1	2650	4 1/2 x 5 1/2	36x4	36x6	W	Diesel, A	1	...	3 1/2 x										

Specifications of Current Motor Truck Models—Continued

NAME AND MODEL	Year	Capacity	Class Price	Base and Stroke	TIRES	Final Drive	NAME AND MODEL	Year	Capacity	Class Price	Base and Stroke	TIRES	Final Drive	NAME AND MODEL	Year	Capacity	Class Price	Base and Stroke	TIRES	Final Drive
					Front Rear							Front Rear							Front Rear	
Kelly-S. K-15	4	5	\$4550	41x6 1/2	36x5 1/2	40x6	C	Opden, E	2 1/2	\$3250	41x6 1/2	36x4 1/2	W	Service, 76	3 1/2	\$4485	41x6 1/2	36x5 1/2	36x5 1/2	W
Kelly-S. K-50	4	5	4900	41x6 1/2	36x5 1/2	40x6	C	Old Hickory, W	1	2175	36x4 1/2	36x4 1/2	W	Service, 101	5	\$275	41x6 1/2	36x5 1/2	40x6	W
Kelly-S. K-80	4	6	5100	41x6 1/2	36x5 1/2	40x7	C	Old Reliable, A	1 1/2	2350	4 1/2	36x4 1/2	W	Signal, NF	1	2475	41x6 1/2	36x5 1/2	36x5 1/2	W
Keystone, 40	2	2	2450	36x5 1/2	34x5 1/2	38x7 1/2	I	Old Reliable, B	2 1/2	3500	4 1/2	36x4 1/2	W	Signal, H	1 1/2	2025	41x6 1/2	36x4 1/2	36x5 1/2	W
Kimball, AB	2	2	3675	4 1/2	36x4 1/2	36x7	W	Old Reliable, C	3 1/2	4250	4 1/2	36x5 1/2	W	Signal, J	2 1/2	3275	41x6 1/2	36x4 1/2	36x5 1/2	W
Kimball, AC	2 1/2	2 1/2	3975	4 1/2	36x4 1/2	36x8	W	Old Reliable, D	5	5250	4 1/2	36x6 1/2	W	Signal, M	3 1/2	4275	41x6 1/2	36x5 1/2	40x5 1/2	W
Kimball, AK	3	3	4500	4 1/2	36x4 1/2	36x10	W	Old Reliable, KLM	7	6000	4 1/2	36x7 1/2	C	Signal, R	5	5300	41x6 1/2	36x6 1/2	40x6 1/2	W
Kimball, AE	4	4	5000	4 1/2	36x4 1/2	40x12	W	Old Reliable Econ.	1	1250	3 1/2	35x5 1/2	I	Southern, 10	1	2090	36x4 1/2	36x3 1/2	36x4 1/2	W
Kimball, AF	5	5	5975	5 1/2	36x6 1/2	40x7 1/2	W	Olympic, A	2 1/2	3500	4 1/2	36x4 1/2	W	Southern, 15	1 1/2	2580	36x4 1/2	36x5 1/2	36x4 1/2	W
Kissel, Express	1	1	1985 1/2	3 1/2	34x5 1/2	34x5 1/2	W	Onida, A-0	1 1/2	2350	4 1/2	36x3 1/2	W	Southern, 20	2	2990	36x4 1/2	36x5 1/2	40x5 1/2	W
Kissel, Utility	1 1/2	1 1/2	2775	3 1/2	34x5 1/2	36x5 1/2	W	Onida, B-0	1 1/2	2915	4 1/2	36x4 1/2	W	Standard, 1-K	1-1 1/2	1950	36x4 1/2	36x3 1/2	36x5 1/2	W
Kissel, Freighter	2 1/2	2 1/2	3475	4 1/2	36x5 1/2	36x7	W	Onida, C-0	1 1/2	3390	4 1/2	36x4 1/2	W	Standard, 76	2-1 1/2	3100	41x6 1/2	36x4 1/2	36x5 1/2	W
Kissel, H. D.	4	4	4475	4 1/2	36x5 1/2	36x5 1/2	W	Onida, D-0	3 1/2	4345	4 1/2	36x5 1/2	W	Standard, 66	3 1/2	4000	41x6 1/2	36x5 1/2	36x10	W
Kliether, AA	1	1	3600	4 1/2	36x5 1/2	34x5 1/2	W	Onida, E-0	5	5460	4 1/2	36x6 1/2	W	Standard, 5-K	5-7	5250	41x6 1/2	36x6 1/2	40x12	W
Kliether, A	1 1/2	1 1/2	3100	4 1/2	36x5 1/2	36x5 1/2	W	Orleans, A	1 1/2	2750	3 1/2	36x4 1/2	W	Stearling, 1 1/2	1 1/2	3200	4 1/2	36x4 1/2	36x5 1/2	W
Kliether, BB	2	2	3600	4 1/2	36x5 1/2	36x7 1/2	W	Orleans, B	2 1/2	3250	4 1/2	36x4 1/2	W	Stearling, 2	2	3500	4 1/2	36x4 1/2	36x6 1/2	W
Kliether, B	2 1/2	2 1/2	3950	4 1/2	36x5 1/2	36x8	W	Orleans, C	3 1/2	3750	4 1/2	36x4 1/2	W	Stearling, 2 1/2	2 1/2	3650	41x6 1/2	36x4 1/2	36x5 1/2	W
Kliether, C	3	3	4600	4 1/2	36x5 1/2	36x5 1/2	W	Orleans, D	5	4250	4 1/2	36x5 1/2	W	Stearling, 3 1/2	3 1/2	4650	41x6 1/2	36x4 1/2	40x5 1/2	W
Kliether, D	5	5	5300	5 1/2	36x6 1/2	40x12	W	Oshkosh, A	2	3750	3 1/2	36x5 1/2	W	Stearling, 5-W	5	5300	5 1/2	36x6 1/2	40x5 1/2	W
Kooler, D	1 1/2	1 1/2	1885	3 1/2	34x5 1/2	34x5 1/2	W	Oshkosh, AA	2 1/2	3850	3 1/2	36x5 1/2	W	Stearling, 5-C	5	6000	5 1/2	36x6 1/2	40x6 1/2	W
Kooler, D	2 1/2	2 1/2	2875	4 1/2	36x4 1/2	36x7	W	Oshkosh, B	2 1/2	4150	4 1/2	36x5 1/2	W	Stearling, 7 1/2	7 1/2	6500	5 1/2	36x6 1/2	40x7 1/2	C
Kooler, MCS	2 1/2	2 1/2	2975	4 1/2	36x4 1/2	36x7	W	Oshkosh, BB	2 1/2	4300	4 1/2	36x5 1/2	W	Stewart, 14	14	1395	36x4 1/2	32x4 1/2	32x4 1/2	I
Kooler, F	3 1/2	3 1/2	3985	4 1/2	36x5 1/2	36x10	W	Packard, EC	...	3500	4 1/2	36x4 1/2	W	Stewart, 15	1	1875	3 1/2	35x5 1/2	35x5 1/2	I
Kooler, MT, Trac	5	5	2975	4 1/2	36x4 1/2	36x7	W	Packard, ED	...	4100	4 1/2	36x5 1/2	W	Stewart, 7	1 1/2	2200	3 1/2	34x5 1/2	34x5 1/2	I
L.M.C., 2-20	2 1/2	2 1/2	2540	4 1/2	36x5 1/2	36x4 1/2	I	Packard, EF	...	4500	5 1/2	36x5 1/2	W	Stewart, 7-X	2 1/2	2900	41x6 1/2	36x4 1/2	36x7 1/2	I
Lange, B	2 1/2	2 1/2	3350	4 1/2	36x5 1/2	36x6 1/2	C	Packard, EX	...	4000	4 1/2	36x5 1/2	W	Stewart, 10-X	3 1/2	2950	41x6 1/2	36x4 1/2	36x7 1/2	I
Larrabee, XZ	3 1/2	3 1/2	1925	3 1/2	34x4 1/2	34x5 1/2	B	Paige, 52-19	1 1/2	2880	4 1/2	36x3 1/2	W	Stewart, 10	10	3850	41x6 1/2	36x5 1/2	36x5 1/2	I
Larrabee, U	1 1/2	1 1/2	2400	3 1/2	34x4 1/2	34x5 1/2	W	Paige, 54-20	1 1/2	3400	4 1/2	36x4 1/2	W	Stewart, 10-X	3 1/2	2850	41x6 1/2	36x5 1/2	36x5 1/2	I
Larrabee, SK	2 1/2	2 1/2	3200	4 1/2	36x5 1/2	36x7	W	Paige, 51-18	2 1/2	4285	4 1/2	36x5 1/2	W	Stoughton, A	1	1995	36x4 1/2	34x4 1/2	35x5 1/2	W
Larrabee, FL	3 1/2	3 1/2	4000	4 1/2	36x5 1/2	36x5 1/2	W	Parker, J20	2	3500	4 1/2	36x4 1/2	W	Stoughton, B	1 1/2	2350	36x4 1/2	36x5 1/2	36x6 1/2	W
Larrabee, FW	5	5	4800	4 1/2	36x6 1/2	40x6 1/2	W	Parker, J20	3 1/2	4400	4 1/2	36x5 1/2	W	Stoughton, D	2	2800	4 1/2	36x4 1/2	36x7 1/2	W
Lion, L	1	1	2350	3 1/2	34x5 1/2	35x5 1/2	W	Parker, M20	5	5500	4 1/2	36x6 1/2	W	Stoughton, F	3	3600	41x6 1/2	36x5 1/2	36x5 1/2	W
Loedingham, C	1 1/2	1 1/2	2100	3 1/2	34x5 1/2	35x5 1/2	W	Patriot, Rover	3 1/2	1785	3 1/2	35x5 1/2	W	Sullivan, H	2	3350	41x6 1/2	36x4 1/2	36x7 1/2	W
Loedingham, W	2 1/2	2 1/2	2700	3 1/2	34x5 1/2	34x5 1/2	W	Patriot, Lincoln	1 1/2	2450	4 1/2	36x3 1/2	W	Sullivan, E	3 1/2	1650	41x6 1/2	36x5 1/2	36x5 1/2	W
Loedingham, W	2 1/2	2 1/2	3150	4 1/2	36x5 1/2	36x7 1/2	W	Patriot, Wash'n	2 1/2	3450	4 1/2	36x4 1/2	W	Superior, D	1	1650	36x4 1/2	34x4 1/2	34x4 1/2	I
Maccar, L	1 1/2	1 1/2	2925	4 1/2	36x5 1/2	36x6 1/2	W	Piedmont, 4-30	1 1/2	1685	3 1/2	34x4 1/2	W	Superior, E	2	2600	41x6 1/2	36x4 1/2	36x6 1/2	W
Maccar, H-2	2 1/2	2 1/2	3650	4 1/2	36x5 1/2	36x6 1/2	W	Pierce-Arrow	2	3200	4 1/2	36x4 1/2	W	Super Truck, 50	2 1/2	3300	4 1/2	36x4 1/2	36x8 1/2	W
Maccar, M-2	3 1/2	3 1/2	4500	4 1/2	36x5 1/2	36x5 1/2	W	Pierce-Arrow	3 1/2	4350	4 1/2	36x5 1/2	W	Super Truck, 70	3 1/2	4300	41x6 1/2	36x6 1/2	40x5 1/2	W
Maccar, G	5	5	5500	4 1/2	36x6 1/2	40x6 1/2	W	Pierce-Arrow	5	4850	4 1/2	36x5 1/2	W	Super Truck, 100	5	5300	41x6 1/2	36x6 1/2	40x12	W
MacDonald, A	7 1/2	7 1/2	5750	4 1/2	36x6 1/2	40x7 1/2	W	Pioneer, 30	1	1550	3 1/2	34x4 1/2	W	Super Truck, 150	7 1/2	6300	5 1/2	36x6 1/2	40x12	W
Mack, AB D.R.	1 1/2	1 1/2	3450	4 1/2	36x4 1/2	36x3 1/2	D	Pittsburgher, C-21	2 1/2	3500	4 1/2	36x5 1/2	W	Texas, A30	3	1095	3 1/2	35x4 1/2	35x4 1/2	I
Mack, AB	2 1/2	2 1/2	3400	4 1/2	36x4 1/2	36x4 1/2	C	Pony	1 1/2	400	2 1/2	28x3 1/2	W	Texas, TK30	1 1/2	1550	3 1/2	35x6 1/2	36x7 1/2	W
Mack, AB Chain	1 1/2	1 1/2	3000	4 1/2	36x4 1/2	36x3 1/2	D	Pow, F	1 1/2	...	4 1/2	36x6 1/2	W	Tiffin, GW	1 1/2	2400	41x6 1/2	36x4 1/2	36x5 1/2	W
Mack, AB Chain	2	2	3300	4 1/2	36x4 1/2	36x4 1/2	C	Pow, C	3 1/2	...	4 1/2	36x5 1/2	W	Tiffin, MW	2 1/2	3100	41x6 1/2	36x4 1/2	36x3 1/2	W
Mack, AB Chain	2 1/2	2 1/2	3750	4 1/2	36x4 1/2	36x4 1/2	D	Promecar, B-143	1 1/2	2475	3 1/2	36x6 1/2	W	Tiffin, PW	3 1/2	4100	41x6 1/2	36x5 1/2	40x6 1/2	W
Mack, AC Chain	3 1/2	3 1/2	4950	5 1/2	36x6 1/2	40x5 1/2	C	Rainier, R-11	1 1/2	2150	3 1/2	35x5 1/2	W	Tiffin, F50	5	4900	41x6 1/2	36x6 1/2	40x6 1/2	W
Mack, AC Chain	5	5	5500	5 1/2	36x6 1/2	40x6 1/2	C	Rainier, R-19	1	2250	3 1/2	34x3 1/2	W	Tiffin, F80	6	5000	41x6 1/2	36x6 1/2	40x12	W
Mack, AC Chain	6 1/2	6 1/2	5750	5 1/2	36x6 1/2	40x12	C	Rainier, R-16	1 1/2	2600	3 1/2	34x3 1/2	W	Titan, HT	3 1/2	4550	41x6 1/2	36x4 1/2	40x5 1/2	I
Mack, AC Chain	7 1/2	7 1/2	6000	5 1/2	36x7 1/2	40x7 1/2	C	Rainier, R-18	2	2950	4 1/2	34x4 1/2	W	Titan, HD	5	5400	41x6 1/2	36x5 1/2	40x6 1/2	I
Mack Trac, AB	5	5	3400	4 1/2	36x4 1/2	36x4 1/2	C	Rainier, R20	2 1/2	3600	4 1/2	34x4 1/2	W	Titan, TS	2 1/2	3400	41x6 1/2	36x5 1/2	36x4 1/2	I
Mack Trac, AC	7	7	4950	5 1/2	36x5 1/2	40x5 1/2	C	Rainier, R-15	3 1/2	4500	4 1/2	36x5 1/2	W	Tower, J	1 1/2	3000	41x6 1/2	36x5 1/2	36x7 1/2	W
Mack Trac, AC	10	10	5500	5 1/2	36x6 1/2	40x6 1/2	C	Rainier, R17	5	5250	4 1/2	36x6 1/2	W	Tower, H	2 1/2	3475	41x6 1/2	36x4 1/2	36x7 1/2	W
Mack Trac, AC	13	13	5750	5 1/2	36x6 1/2	40x12	C	Ranger, TK-20-2	2	...	3 1/2	36x6 1/2	W	Tower, G	3 1/2	4400	41x6 1/2	36x5 1/2	36x5 1/2	W
Mack Trac, AC	15	15	6000	5 1/2	36x7 1/2	40x7 1/2	C	Roe, F	3 1/2	1385	4 1/2	34x4 1/2	W	Traffic, C	...	1565	3 1/2	34x4 1/2	34x5 1/2	I
Mapleleaf, AA	2	2	4150	4 1/2	36x4 1/2	36x7	W	Roliance, 10A	1 1/2	2400	4 1/2	36x3 1/2	W	Traffic	3	1895	3 1/2	35x4 1/2	36x7 1/2	I
Mapleleaf, BB	3	3	4775	4 1/2	36x5 1/2	36x4 1/2	W	Roliance, 20B	2 1/2	3100	4 1/2	36x4 1/2	W	Transport, 20	1	1395	3 1/2	34x3 1/2	34x4 1/2	I
Mapleleaf, CC	4	4	5770	4 1/2	36x5 1/2	36x5 1/2	W	Republic, 75	1 1/2	1395 1/2	3 1/2	32x4 1/2	W	Transport, 30	1 1/2	1995	3 1/2	35x3 1/2	36x5 1/2	I
Mapleleaf, DD	5	5	6825	4 1/																

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The Show Season Is On!



—And Uncle Sam Cranes His Neck to See What's Going On Across the Border

CANADA STARTS FALL BUYING WITH NATIONAL SHOW

Automotive Section Is Strong Feature of National Exhibition—It Suggests Wider Use of American State and County Fairs to Stimulate Motor Transport Education and Sales

By NEAL ADAIR

TORONTO, Sept. 3.

BEFORE the Canadian National Exhibition closes a week from to-day half a million people will have seen the season's offerings in automobiles sold and manufactured in the Dominion.

Thus, in a sentence, may be told the story of the annual Canadian Motor Show, which is being conducted for upward of the twentieth time as a feature of the forty-third annual exhibition of the Dominion's industries, commerce and agriculture.

It is the story of a wonderful opportunity wonderfully utilized. The National Exhibition, without parallel anywhere in the world, draws its attendance not only from Ontario and bordering sections of Quebec and Manitoba, but from all the nine provinces, with several thousand Americans from states across the Lakes thrown in for good measure. In recent years the million mark has always been passed in aggregate attendance, and half the crowd, conservative estimators say, pass through the aisles of the great Transportation Building, housing the motor show. This year the attendance was well along toward half a million as the first week ended, Labor Day promises almost a quarter of a million more and the final days of next week, according to all indications, will pile up a total gate equalling and quite possibly exceeding previous records.

THERE are motor trucks and automotive equipment in the exhibition, too, but the Transportation Building, in which the car display was held, is too small to accommodate them and the tented city of the truck men and the transformed soldiers barracks of the accessory exhibitors are drawing their crowds. But with the handicap of poor housing these exhibits will get only part of the vast throng, many thousands of whom already have viewed the passenger cars.

The exhibition motor show comes on the eve of the Canadian's investing season, when the farmer has his crop money in his pocket and everybody serving the farmer—and this is virtually everybody in Canada—is sharing in the golden yield of the soil. It has always been a good selling show and a time for rebuilding prospect lists worn down by the summer's canvassing. The early days indicate that this year's exposition will not be an exception. The market, as in the United States, is not one to rush in and buy cars, but before the show had been open 48 hours some sales had been made on the floor and every exhibitor was building up a list of serious-intentioned prospects.

In the truck section interest is light and the exhibitors declare

their lot will not be otherwise until building accommodations are made permitting their housing under a permanent roof,

preferably with the passenger cars. Yet truck prospects are being obtained, too, and the exhibition effort, in the opinion of all the truck men, is going to be far from profitless.

The accessory men, manufacturers, manufacturers' agents and jobbers, are depending on a campaign to draw dealer attendance, already yielding results, to give them returns on their exhibition investment. The accessory show, staged under the eye of the Canadian section of the Automotive Equipment Association, has got away from the obnoxious retailing which has marked some exhibits both here and in the States and the result is a dignified and thoroughly representative display of garage equipment and motor car utilities, of considerable interest to the motoring public and of first interest to the dealer and garageman.

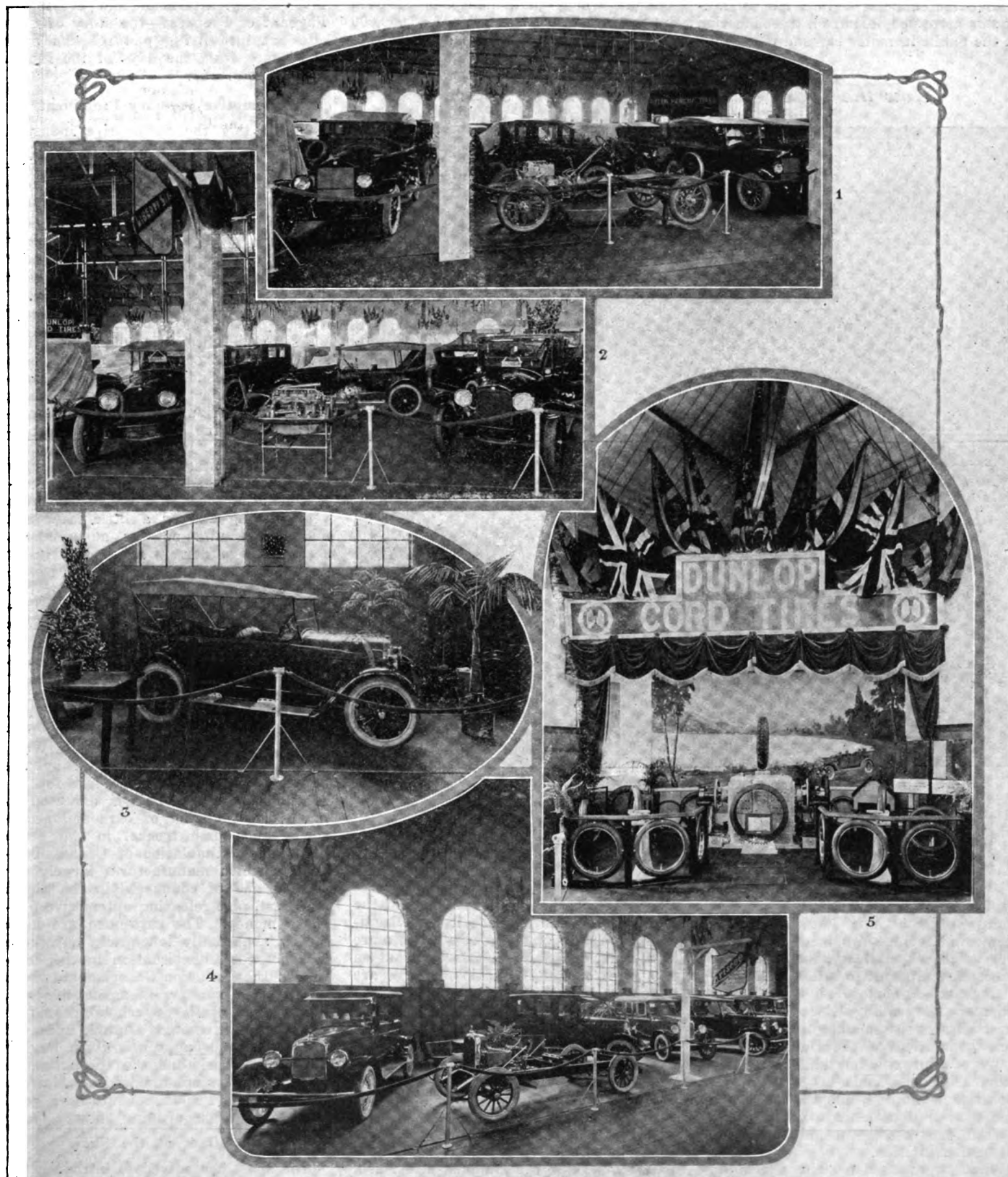
The automotive section of the exhibition, which might be likened to a dozen or so American state and county fairs combined in one, offers some practical suggestions to the motor car and truck men across the border. Several American State fairs have automotive shows, some of them better business stimulators than the mid-winter exhibitions in the same cities, but in many sections of the States the State

Opening the Exhibition



Baron Byng (with manuscript), new Governor General, hero of Vimy Ridge, opened the exhibition. Lady Byng is seated at the left with a bouquet of American Beauty roses presented by the exhibition directors

SOME OF THE STRONG MERCHANDISING DISPLAYS IN THE CANADIAN EXHIBITION



1—Gray-Dort had a cut-out chassis in operation and some growing greens decorations. 2—Liberty followed the "court" idea with an engine at the front. Note the plush ropes, along all aisles in the show. A salesman unhooks the barrier for interested observers who want to go inside. 3—Durant in its first public exhibition showed a single model but had plenty of "atmosphere." 4—Briscoe had a fine, open exhibit, with a stripped chassis on the aisle and palms and ferns in the background. 5—Dunlop had a corner in the passenger car building and followed the educational idea of demonstrating some processes of manufacture

and county fairs are overlooked as opportunities to sell the motor transportation idea—passenger and freight—and at the same time sell cars and trucks. It is not necessary to dwell on the sales possibilities of a collective showing of the Dominion's automotive merchandise before half a million or more people, nor on the education of the public in motor car and truck util-

the suggestion has big possibilities. Perhaps a further story of the Canadian show may help to bring them to the front.

What the Exhibition Is

This great exhibition, an institution in Canada whose permanency is attested by the investment this year of \$2,000,000 in a livestock arena, still under construc-

Canadian gathered together for all of Canada to see and study and admire and be better Canadians because of it. There is a Midway, of course, for people must play while they learn, and on an 800-ft. long semi-natural stage in front of a grandstand that seats 20,000 persons is given every afternoon and evening a Pageant of Progress—the story of Canada put into living pictures and song and dance from the days of the Indian to the motor car.

How the Trucks and Accessories Were Shown



Upper—The truck exhibitors at the Canadian show were handicapped by lack of a building but they commanded attention just the same. Lower—In the automotive equipment exhibition at the Canadian show. "Not too bad," as they say in the Dominion, considering the location, in a one-story wartime barracks

ity by means of such an exposition. There are something like nine million people in the nine provinces and one in every eighteen, at least, sees the motor show. It is difficult to believe that many of the stay-at-homes can miss hearing the story or reading it in the newspapers. Strangely enough, the motor vehicle population of the Dominion, estimated at approximately half a million at mid-year—also stands at 1 to 18 ratio with the population, and the automotive men give a liberal share of the credit for this progress to the influence of the national exhibition.

What might be done with the motor-show-at-the-fair idea of the Canadians and of several American States in many sections of the United States where really big fairs are held, the automotive men of those sections know best. But

tion, was born in the pioneer days of the Dominion. Year by year it has visualized the Dominion's progress. It is more than a national fair. Scattered about on 260 acres of Lake Ontario frontage are a dozen or more permanent buildings—the Government Building, the Transportation Building, which used to house coaches and buggies and a few motor cars and now is given over wholly to gas-propelled passenger vehicles, the Manufacturers' Building, the Horticultural Building, the Administration Building, the Press Building and so on. In the Government Building the Dominion departments show the animals, birds, fish, grains, fruits, flowers and minerals and many other uncatalogued natural resources of the country. In the other buildings are the natural and manufactured products of the nation—everything

Automotive Industry Prominent

In all this the automotive industry, recognized as the first manufacturing enterprise of the Dominion, has a prominent place. The Transportation Building is one of the largest on the grounds and for the next year the automotive men have assurance that at least a permanent building will be devoted to trucks and automotive equipment, with a larger Transportation Building, housing all the products of the industry, as a hope of the future.

As for the automotive men of the Dominion and particularly of Toronto, where most of the Canadian and American manufacturers have their principal offices and main distributorships, they are confidently counting on the show to stimulate business. It has been—well, they describe it expressively here when they say, "Not too bad." The business readjustment has been in progress about a year, having started a little later and not being quite as far advanced as across the border. Cars had a fairly good May and June, in a few cases a good July, though except in one or two instances there has been no such stimulation as a result of price reductions as prevailed in quite a good many lines in the States. August generally has been a poor month. Now come reports of normally good crops in the prairie provinces—Manitoba, Saskatchewan and Alberta—and while some of the proceeds, as in the American Middle West, will go to satisfy notes held by the banks, there will be some left for essential purchases. This is expected to mean direct buying of cars and accessories and some trucks, in the grain belt, and a stimulation of Canadian industry, which manufactures largely for Canada and of commerce in the South and East, also releasing automotive purchase money. The cattlemen are hard hit by abnormally low prices but there is relief for this situation in the decision of the Dominion Government, which is quickly responsive to agrarian needs, to carry the cattle raisers along on federal loans. In eastern Ontario and part of Quebec a drought has given buying power a setback and the stagnation in shipping and shipbuilding is a blow to the Maritime Provinces, but there good crops are an encouraging offset.

New Cars at the Show

The show has served to introduce the new Durant four of American manufacture and the new McLaughlin four built at Oshawa by the McLaughlin (Canadian equivalent for Buick) division of General Motors of Canada, Ltd. The Reo

has its 1922 series car on display and Willys-Overland of Canada, Ltd., is showing a special model, with composite body, of the Overland four. The Paige Daytona model roadster is having its first Canadian showing. Vauxhall and Austin represent England in the show and Fiat, car and truck, are shown by representatives of the Italian manufacturers. Rolls-Royce, which has arranged Canadian representation, was unable to get a car to Toronto before the Exhibition opened.

Canadian Prices High

The dealers have to combat considerable lower price talk, which has some of its foundation in the margin here of 50 per cent, on the average, over American prices. Take a \$2,000 car, bring it here from the United States, paying the import duty of 35 per cent, the Canadian sales tax applying to all merchandise, freight and other charges and the difference between American and Canadian money value, now amounting to about 10 per cent, and you have to sell it for \$3,000. And because of the import duties on parts and the higher production costs per unit because of lesser volume, the Canadian manufacturers and assemblers—Willys-Overland, General Motors, Gray-Dort, Studebaker, Ford, Briscoe, Maxwell-Chalmers and several truck manufacturers—have only been able to slightly underbid American prices on lines imported complete.

Better Highways Coming

A good many Canadians think their cars come high, but they are buying them just the same and they will buy them in increasing quantities as the provinces grow and as the factor of sales resistance in poor roads is overcome. Quebec has led the way so far, but Ontario is forging to the front with a \$10,000,000 appropriation this year and a promise from Highways Minister Biggs that 75 to 100 miles of permanent roads and 600 to 700 miles of gravel highways will be available for traffic by the end of the year. And the other provinces are joining the good roads brigade.

The automotive equipment manufacturers and jobbers are having a fairly good season, especially on repair tools and supplies, and they see a good fall trade ahead. The truck men have had a near-stagnation comparative with that in the States. But throughout the industry—in the car, truck and equipment field—there is unanimous determination to carry on and substantial assurance, found among other places in the show attendance and interest that it will pay to carry on.

Very decisively it is the opinion that business is going to be "not too bad" this fall and in 1922.

In the Exhibition is found a representative list of Canadian manufacturers and American manufacturers on their Canadian distributors as follows:

Passenger Cars

Austin Motor Co., Ltd., Birmingham, Eng.—Austin.
Automobile & Supply Co., Toronto—Hupmobile, Paige.
British & American Motors, Ltd., Toronto—Marmon, McLaughlin.
Bailey-Drummond Motor Co., Toronto—Standard Eight, Auburn.
Chevrolet Motor Co., Oshawa, Ont.—Chevrolet.
Chalmers Motor Co. of Canada, Ltd., Windsor, Ont.—Chalmers.
Canadian Briscoe Motor Co., Ltd., Brockville, Ont.—Briscoe.
Colaway Motors, Ltd., Toronto—Cole, Columbia, Gardner.
Dominion Automobile Co., Toronto—Hudson, Essex, Peerless.
Durant Motors, Inc., New York—Durant.
Ford Motor Co., Ltd., Toronto—Ford.
Fiat, M. A. Kennedy, Ltd., Toronto—Fiat.
Gray-Dort Motors, Ltd., Chatham, Ont.—Gray-Dort.
Hyslop Bros., Ltd., Toronto—Cadillac.
London Motors, Ltd., London, Ont.
Moon Motor Sales Co., Toronto—Moon.
Moore, H. B., Ltd., Toronto—Dodge Bros.
Metropolitan Motors, Ltd., Toronto—Oldsmobile, Stutz.
Mitchell Motors Corp., c/o Crompton Car Co., Ltd., Toronto—Mitchell.
Maxwell Motor Co. of Canada, Ltd., Windsor, Ont.—Maxwell.
Nash Motor Sales, Ltd., Toronto—Nash.

Packard Ontario Motor Co., Toronto—Packard.
Premier Motor Sales, Ltd., Toronto—Liberty.
Pierce-Arrow Motor Co., Ltd., Toronto—Pierce-Arrow.
Reo Motor Car Co., Toronto—Reo.
Rhodia Motors, Ltd., Toronto—Lexington, Roamer.
Studebaker Corp. of Canada, Ltd., Walkerville, Ont.—Studebaker.
Todd & Co., R. C., Toronto—Allen, Westcott.
Willys-Overland, Ltd., Toronto—Willys-Knight, Overland.
Wilson Motor Sales Co., Toronto—Franklin.
Vauxhall Motors, Ltd., England—Vauxhall.

Trucks

British & American Motors, Ltd., Toronto—G. M. C.
Burkells, Ltd., Toronto—Maxwell, Hall.
Canadian Gary Trucks, Toronto—Canadian Gary.
Chevrolet Motor Co., Oshawa, Ont.—Chevrolet.
Fiat Motors, Ltd., M. A. Kennedy, Toronto—Fiat.
Federal Motor Truck Co., Jones Motors, Ltd., Toronto—Federal.
Four Wheel Drive Auto Co., Kitchener, Ont.—Fourwheel Drive.
Gottfredson Joyce Corp., Walkerville, Ont.—G & J.
Harmer & Knowles, Toronto, H & K.
International Motor Co., Toronto—Mack.
Leyland Motors, Ltd., Toronto—Leyland.
Mapleleaf Mfg. Co., Montreal—Mapleleaf.
Nash Motor Sales, Ltd., Toronto—Nash.
National Steel Car Corp., Hamilton, Ont.—National.
Packard Motor Car Co., Toronto—Packard.
Pierce-Arrow Motor Car Co., c/o G. E. Givan, Ltd., Toronto—Pierce-Arrow.
Ruggles Motor Truck Co., London, Ont.—Ruggles.
Reo Motor Sales Co., Toronto—Reo, Jumbo.
Republic Motor Trucks, Canadian Trucks, Ltd., Toronto—Republic.
Tilling Stevens Motors, Ltd., Maidstone, England—Tilling Stevens Motor Bus.
Traffic Motor Truck Co., Toronto—Traffic.
White Co., Ltd., Toronto—White.
Waltham Motor Corp., Toronto—Waltham.
The automotive equipment exhibitors' list contains several times as many names.

WILLYS-KNIGHT AND OVERLAND PRICES CUT

TOLEDO, Sept. 6—Another price reduction has been made by the Willys-Overland Co. on the prices of all models of Willys-Knight and Overland cars. It is stated that the reduction was made possible partly through manufacturing economies which have been in process of installation in the plants for the past year and a half and partly through lower costs of raw materials.

The Overland prices follow:

	New Price	Old Price
Fouring	\$595	\$695
Coupe	850	1,000
Sedan	895	1,275

Willys-Knight prices are:

Touring	1,525	1,895
Coupe	2,195	2,550
Sedan	2,395	2,750

The present model of Overland touring car was first offered to the public in 1919 for \$845. The price later was raised to \$1,035 but it was cut to \$695 in June of this year.

The Willys-Knight touring car sold for \$2,300 last year and the present reduction makes a total price cut of 34 per cent.

New Ranger Model

HOUSTON, Sept. 6—The Southern Motor Mfg. Assn., Ltd., is now at work on the production of a six cylinder model. This will be known as the Ranger, having the same name as the previous four cylinder model which has been on the market for some time. The new six will be fitted with a number of different style bodies including both sport and conservative designs.

HUDSON CAR WINNER OF PIKE'S PEAK CLIMB

DENVER, COLO., Sept. 5—Nearly 7000 people saw King Rhiley in a Hudson car win the Penrose trophy and a \$500 cash prize to-day in 19:16.2 in the main event of the Pikes Peak annual hill climb on a twelve and two-fifths mile course of the \$250,000 Pikes Peak automobile highway.

The second fastest time was 19:47.8 by Otto Loesch in a Lexington, trophy winner of last year and to-day had first place in event number two for 184 to 300 cubic inches piston displacement. Second place in event number two was won by J. C. Williamson in an Allen in 22:49.6.

The third best time was 19:51.2 by Ralph Mulford's Paige, winning second place in the trophy event.

CREDIT? Why Certainly, Says This Tire Distributor

The Story of How a Detroit Tire Business Has Prospered Through Specializing on One Brand and Selling for a Small Down Payment

CAN tires be handled on credit terms successfully? S. Kleinman, Michigan distributor of Falls tires, says they can. Kleinman ought to know. He's doing it. He has been doing it, in fact, for the past two years, and he is well satisfied with the success of his venture.

It all came about this way: Kleinman was in the tire business in Detroit, handling all the popular makes of tires in the usual way—that is, doing a strictly cash business. He carried fifty or more different tires. He was doing a good business, as such businesses go, but there

were certain circumstances that did not please him.

For one thing, he had to carry too much stock in order to have a supply of all sizes of all makes that his customers were likely to call for. Some of the tires were good, some were fairly good, some were no good. But he had to handle them all, and when a customer bought a cheap tire and had trouble with it, he blamed the man who sold it to him, no matter whether that man had warned him against a cheap tire. Customers seem to be constituted that way.

THEN, too, there were the cut-rate dealers who were selling tires for a song and cutting in heavily on the ethical dealer's business. They advertised heavily and got a great deal of business, especially from the small car owners.

Kleinman studied newspaper advertisements of all kinds, looking for the secret behind the success of the advertisers. And he observed that many of the heavy advertisers offered their goods on easy terms. A furniture merchant, a jeweler, a clothier, would sell one merchandise for a small sum at the time of purchase and grant the purchaser several months in which to pay the remainder a little at a time.

Why could not tires be sold on the same plan? Deterioration, of course. Jewelry and furniture do not deteriorate so rapidly, and those selling such goods could demand the return of the merchandise in case the purchaser failed to keep his agreement within a reasonable time. Many tires, if subjected to hard usage, would be worn out before paid for; then the purchaser could tell the merchant to come and get his old tire. It would be manifestly unwise to undertake to sell a general line of tires on credit.

But if one should specialize on one good line of goods? Kleinman selected a tire that was guaranteed for 10,000 miles which he had been handling along with his fifty-odd others and which he knew. The average person, almost any person, would have the tire paid for long before he had used it that much.

"I knew tires," says Kleinman. "I had been handling tires ever since the early bicycle days, thirty years ago. I had been an accessories dealer for years and years. I had been one of the first used car dealers in the city of Philadelphia. I knew tires, I knew cars, and I knew the trade. I felt sure that I could make a success of a credit tire business by specializing in one line, if it were a good one. The credit feature would be merely an advertising feature, of course; a matter of service to my customers.

"I went to my banker, a man whom I had known, and who had known me for years, and broached my plan. He wouldn't listen to me at all. I asked him for his objections and he said too many people would take advantage of me and escape payment. What, for example, he

How One Dealer Sells Tires on Credit

WHEN Kleinman decided to sell tires on credit he did these things:

- 1—Concentrated on one good product.
- 2—Advertised his credit feature strongly.
- 3—Went after corporations and owners of larger cars.
- 4—Adopted attractive service policy.
- 5—Co-operated with other credit dealers — furniture, etc.

Kleinman's business is growing rapidly, making profits, and he is optimistic concerning the future of his business under the credit plan.

wanted to know, was to prevent a customer from cutting a tire and claiming that it was no good when he bought it? What about skips and dead beats generally?

"The banker would not give his approval to the scheme.

"Then I went to the president of the factory that makes the tire I had selected. He didn't like the idea either. He was perfectly willing to sell me tires, of course, and to guarantee them as he had always done, but if I undertook to sell them on any such terms, I would be doing so at my own risk.

"So, to start with, I had to go it alone. I had faith in the plan, though, and I went into it absolutely on my own responsibility. I sold some stock that I had on hand and put the cash into the

business without asking any man for a dollar.

"The results? We have been selling this tire on credit for two years now and to-day, in spite of the business depression, in spite of the fact that it now takes five tires to equal in price three tires at last year's prices, we are doing more business in actual dollars and cents than we did when we carried a full line of tires and sold for cash at high prices. Our business right now is 40 per cent above what it was at this time last year.

"A little while ago we went through our records and established the fact that over 50 per cent of our last year's customers are repeaters. And by a repeater we mean one who has worn out at least one tire and then bought another, not just one who bought one tire last month and another this month.

"The business is growing by leaps and bounds and by another year we expect to be doing the biggest tire business of any dealer in the country. We have the state rights for our tire and we expect soon, if business improves, to solicit business from dealers. At present we are only retailing."

Kleinman does not appeal to the poorer trade. Instead, he goes after the very best business to be had. He doesn't cater especially to owners of the heaviest cars, but he goes after the business of corporations and of the larger merchants right along. At present large corporations and many of the department and clothing stores are on his list of regular customers. Those who operate six or more cars or trucks are given a discount.

Kleinman has two grown sons associated with him in the business and one of these acts as sales manager, while the other is credit manager. The sales manager goes out after the commercial business, calling upon merchants and superintendents in their places of business. The firm has advertised extensively in the newspapers.

In addition to newspaper advertising,

this house also sends out considerable direct mail publicity. In this a circular letter is prepared and sent out, possibly with some manufacturer's stuffers, though not necessarily so. Direct mail and billboard advertising will probably be the only publicity used in the near future. At present Kleinman is operating ten boards and sending out some 40,000 letters every month or so.

Service to Customers

Kleinman and his sons are thoroughly convinced to make a success of such a venture as they have undertaken, they must give real service to their customers. In pursuance of this conviction they not only guarantee their goods, but keep them in repair for one year. They have a tire shop in the rear of the salesroom and all three are mechanics, so that they are able to take care of the repair work by employing only one additional man.

Another service which they perform for their customers free of charge is that of inspecting wheels to see whether they are properly aligned. Many car owners are not aware of the fact that wheels out of alignment will soon ruin the tires. To each customer they give a card which entitles him to one thorough inspection of his wheels. The offer is good for thirty days and the inspection is wholly free of charge. In case the wheels are found to be out of alignment, the owner can take his car to any garage and have them trued up. The tire dealer does not do this work himself.

The Credit Arrangements

The credit feature of Kleinman's business is merely an advertising idea. He sells tires on credit, but he also sells for cash. The extension of credit to a customer is often a convenience and a genuine service to the latter and this brings considerable business.

Credit transactions are carried on much as they are in a furniture or jewelry store where terms are given.

The applicant must be either known or well recommended or else submit to an investigation. A customer who is known or well recommended may buy a tire and take it right out with him, but otherwise he must make an application, make an

The purchaser signs a contract to pay a certain amount each week, two weeks, or month, as he may wish. The goods must be paid for within a specified time and are the property of the dealer until entirely paid for.



Credit Offer a Tire Sales Builder

This is how Kleinman, Detroit distributor, advertises his credit system. In two years' operation the business has grown steadily and profitably. Kleinman is applying the same conditions to tire purchases on credit that furniture dealers and others do. This illustration also shows a card this distributor uses to advertise his wheel alignment service.

initial payment, then wait a day or so before getting his goods. This is regularly done in other installment businesses, however, and the customer can hardly expect anything else.

Kleinman co-operates with other credit dealers in the city and receives considerable information and assistance from them, as well as rendering the same services to them.

All tires are sold at the regular list prices and no interest is charged, the dealer depending upon increased volume to compensate him for the use of his money.

There is some loss, as there is in any credit business, and collections are somewhat difficult during these trying times, but on the whole Kleinman is optimistic and is selling tires on credit right along.

A Policy That Is Selling Used Cars

THE E. R. Parker Motor Co. of Birmingham, Ala., Atlanta and Macon, Ga., has instituted a thirty-day service guarantee on every used Cleveland, Chandler or Marmon car with a twenty-four-hour trial on every used car of any make that is sold from their three places of business. This is in the nature of a guarantee of good faith in the sale of used cars.

"It is only honest to admit that the purchase of used cars is a risky business sometimes and it is our aim to make that risk as small as possible, thereby cultivating the faith of the buying public in the E. R. Parker Motor Co." said T. B. McCarty, manager of the local branch. "Unless sincere consideration is given to the used car problem which now exists among motor car dealers throughout the country we will wake some morning to find that serious complications have arisen which bid fair to

prove embarrassing for those of us who are merchandising automobiles.

"There is a great temptation on the part of every dealer to overstep the bounds of good judgment and make undue allowances on used cars in making trades. In the heat of a trade it is very easy to go too strong on an allowance when sound reasoning must be hammering on the fact that an overallowance always acts as a boomerang. To overallow is to overcharge. For, to remain in business one is bound to make a fair profit. If profits are sacrificed to the public in trade service, the better half of the car must become inefficient because stunted.

"A fair allowance insures better service and satisfied customers and satisfied customers insure permanency which guarantees continued efficient service. Without continued efficient service no car can prove efficient.

"If a used car is traded in at 100 per cent value, honestly conditioned and sold at a fair profit the public will soon become educated as to where to purchase used cars. That is our policy and our ambition. We try to make every sale, especially the sale of a used car, a monument to our fairness and honesty, for it is certainly in a dealer's handling of used cars that his honesty is liable to be questioned. We encourage questions from prospects on particular cars so that there will be no chance for misunderstanding. We have some cars in splendid shape, others are good, still others are not so good—and we tell the customers so. We invite critical inspection by outside mechanics, then put our guarantee and 24 hours trial on every car we sell. We are getting rid of our used cars and it is this policy we believe that accounts for the used car trade that we enjoy."

wasting your time on a farmer who cannot pay or give satisfactory settlement for an outfit. Let your competitor get that business, if he wants it. Make up your mind before you put a name on your prospect list that the farmer is good and that if you do sell him, the credit is safe."

In order to make certain that every customer will be satisfied with his purchase, Taber has established a "Golden Rule" selling policy. He insists that his dealers place themselves in the prospect's boots before making a sale. He advises them to analyze the prospect's needs as though they themselves were to buy the tractor. If the dealer can convince himself that he would buy a tractor under similar conditions, there is good reason to believe that he will eventually sell the prospect.

To illustrate how this principle works out, there is a prospect near Fargo who has 400 acres of plowing to do. He's a cash man and, knowing the value of a dollar, he is cautious about spending the price of an 18-30. Taber is going to take a plow out to the farm and plow 100 acres if necessary to make the sale. He has convinced himself that this man needs a tractor and his idea of selling is to make the prospect realize his need by actual demonstration. Last year he plowed 143 acres on one prospect's farm, but he made the sale.

Taber has worked out a plan that insures prompt parts service for his customers. He has made up a list of parts that the dealer really ought to have. The cost of this list is \$107.50. If it were left to the individual dealer to figure out the parts he will need

the chances are he would not stock any at all, or might stock a lot of parts which would not be called for. By compiling the list of parts Taber sees that the dealer has the right assortment of parts and makes it as inexpensive as possible by minimizing the investment.

Along in February every dealer is urged to make an appeal to his customers to place their orders for parts so that their equipment will be ready for service when the time comes to get out into the fields. Every tractor in the field in good working condition is regarded as an advertisement that will bring results in the form of sales. Consequently, when the demand for power comes in the spring, Taber, through his dealers, has made an effort to have every Allis-Chalmers ready for work.

Pittsburgh Jobber in Fine New Home



New home of the Dyke Motor Supply Co.

ONE of the latest contributions to the beauty and dignity of automotive architecture is the new home of the Dyke Motor Supply Co., a Pittsburgh jobber. The building rises six stories, 50 x 110 ft., all of concrete construction, at the corner of Webster and Chatham streets, a short distance from Bigelow Boulevard, the main automobile thoroughfare of Pittsburgh.

Exceptional in its beauty as well as in its arrangement for the display and sale of automotive equipment is the main salesroom on the first floor, which occupies a space 50 x 100 ft. One-half of the salesroom is devoted to bins and display cases, the balance to garage equipment and machinery. The general sales offices and purchasing department are on the mezzanine floor in the rear and in the rear of these are located the shipping and receiving departments. The receiving room permits six trucks to be under cover while loading and unloading. On the second floor are located the book-keeping department, order room and general stockroom. The third floor is

devoted entirely to rims and brake linings and the fourth floor to tires and inner tubes. General stock of the heavier merchandise, such as bumpers, are stored on the fifth floor. The surplus stock is carried on the sixth floor.

This business was started in 1913 by Hubert and A. E. Dyke and was originally located in a single room on Liberty Avenue as a retail enterprise and continued as such for three years. In 1916 the retail business was eliminated and

since then it has been devoted to wholesale only. The firm travels five salesmen in western Pennsylvania, eastern Ohio and West Virginia.

The opening of the new building was celebrated with a show, at which 40 products from manufacturers were exhibited on the eighth floor, and, with the co-operation of the manufacturers, a large number of dealers were entertained and acquainted with the items exhibited.

Beauty and Accessibility in This Jobber Salesroom



This is the handsome salesroom in the new Dyke Motor Supply Co. building in Pittsburgh as seen on the opening. The building is modern in every department

"And the Devil Take the Hindmost"

New Contest Plan, Whereby the "Low Man" for Two Consecutive Months Is Automatically "Canned" from the Sales Force, Makes Philadelphia Concern's Staff Scramble for Customers

SUPPOSING:

You were one of a fair-sized force of automobile salesmen,

AND SUPPOSING:

The sales manager were to announce a prize contest for each month,

BUT SUPPOSING:

He were to add that any salesman who should be "low man" in the volume of sales for any two consecutive months would be automatically "canned"—

Wouldn't it make you scramble for customers?

WELL, that's about the situation with the sales force of Grieb & Thomas, Inc., Kissel and Briscoe dealers in Philadelphia.

July was such a surprisingly good period for this season of the year from the standpoint of sales, that the sales manager, Robert M. McCormick, decided to make August—usually a rather dull month—and succeeding months even better than July. Accordingly he began to plan various changes to "pep" up.

First, he assigned a car for the use of each salesman—something which was not customary here. That, of course, was to speed them up and give them a chance at the much larger number of calls he wished all to make.

"I have found it an almost inflexible rule that the man who makes the most calls gets the most business," says McCormick. "And I do not consider telephone calls in this connection."

Some of the men had been slated for five calls a day. In the contests each salesman is expected to make a minimum of 15 calls a day. If he doesn't, there is to be a certain deduction from that salesman's volume of business—and the contests are to be decided principally on the basis of volume. There are to be no quotas, but sales of both new and used cars count. As used cars had been going somewhat slowly at this house, the salesmen's commissions thereon were increased.

The prizes for the contests are substantial and

worth while—such, for instance, as watches, suitably engraved; stick pins, cuff links and the like, the first three prizes being valued at from \$300 to \$400.

The "floor trick" was split three ways—from 1 to 3 p. m.; from 3 to 6 and from 6 to 9, affording each floor man part of the day off to see his outside customers so that no excuse could be made that he had to miss them because of being "tied up inside."

The good effect of this has been patent since its inception. In fact, the entire force has shown its mettle from the first day of the change and some of the men—with the aid of their individual cars—have been making as many as 18 calls daily.

The salesmen have entered into the contests good-naturedly and there are some "heroic efforts" to keep from being the last man for even the first month—for, of course,

the man who isn't at the bottom for the first time has nothing to fear.

One of the hardest working salesmen and one who is among the foremost in results is a former instructor in higher mathematics at the University of Pennsylvania.

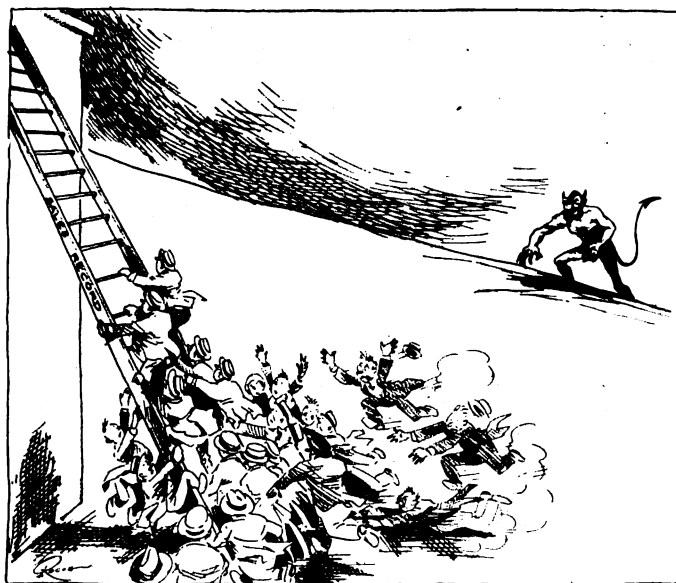
When he applied for a place on the selling staff, he didn't know anything at all about automobiles, "but I know I can sell them," he added. McCormick says he tried to convince him that sometimes it was exceedingly difficult for a man unacquainted with cars to get the signature on the dotted line, but—

"You can't discourage me from selling those cars," said the 'varsity man. He was taken on forthwith and "made good" from the start—which was on July 11. Up to August 5 he had sold just nine automobiles.

And, while this salesman was making this particularly fine showing for a beginner, the other salesmen on the staff were eclipsing their records of former months and this in turn was contributing to their enthusiasm for even greater selling effort. The increased number of calls that the salesmen were making under the new order of things undoubtedly had its particular effect upon total sales.

But, the big, important thing was that August, which always had been regarded as a slow month, even when things were booming, has continued the upward bend of this dealer's sales record.

Increased efforts also have brought the sales force increased income.





Houses and Food and Clothes—and Trucks

By NEAL ADAIR

“WOULDN'T that make you purple around the gills?”

Henry Bennett, who sold a more than occasional Duhr truck in Callawassa, despite the general notion that nobody was buying trucks, angrily waved a newspaper in front of his old friend, Reilly.

“What?” said Reilly.

“What the paper says,” Bennett replied testily.

“Well, what does the paper say?” Reilly countered. “How do you suppose I can see what the paper says when you are waving it around like a Spanish Toreador trying to get some action out of an over-fed bull.”

Bennett cooled off sufficiently to put the paper down on the desk in front of Reilly and point with a husky forefinger at a black headline.

Reilly, head of the company that had a sizable squadron of Sayanna trucks, as well as a good many hundred Sennett cars, running around the territory, read the headline aloud:

“‘Speeding Truck Crushes Child.’”

“That’s hard news for a mother and father somewhere,” he commented; “but why the excitement? It seems to be one of those things we can’t entirely wipe out as long as youngsters play in the streets and—”

Bennett broke in. “Sure, it’s hard news, and I’m sorry. Every time I read one of these things I think, ‘What if it were my Jennie?’ But it hurts—it hurts business. It gets people down on trucks; gets a lot of these haulers with horses saying they guess they’ll stick to hoofs and hide. We ought to do something with these newspapers.”

“Do something? Do what?” Reilly replied. “You can’t keep newspapers from printing news, and accidents are news.”

“Yes,” Bennett came back, “but there must be some way of offsetting this sort of thing. It’s in the papers and—”

Reilly cut him short. “Now you’re talking. There’s always a way over every difficulty—or around it.”

“Yes; but how?” the Duhr dealer asked. “Our dealers’ safety council is working with the police right along and

we’ve put out a lot of ‘safety first’ propaganda through the schools and we’re trying to get truck owners to educate their drivers, and—and—the accidents go right on just the same, and the newspapers go right on printing them, and it hurts, it hurts.”

“Sure; hurts me, too,” Reilly paused. “Oh, Henry—” he was going to tell the truck dealer, who was getting into the truck class himself, as humans go, to button up the bottom button of his vest, but desisted when he guessed that Bennett was more comfortable that way.

“Huh?” Bennett grunted.

“I was going to say,” Reilly went on, “that all this safety council work is fine; but, Henry, here’s a bright idea, fresh from a bright spot—”

Bennett bowed soberly.

“And the idea is just this. Why not counteract this hurtful publicity with favorable publicity for the truck?”

“Must have been an awful chore to hatch that idea,” said Bennett sardonically. “That’s old stuff—old, old stuff.”

“No, it’s not old stuff,” Reilly insisted. “It’s new stuff—listen.”

“Under protest,” Bennett commented, and folded his hands across the open buttonhole.

Reilly leaned forward. “Henry,” he said, “we’ll agree that these truck accident stories make the public dislike trucks, and truck prospects naturally absorb some of the dislike. All right. Now, let’s get into our advertising, and, whenever we can, into the news columns of our papers, something to make the public like trucks—and see if our truck prospects won’t absorb some of that sentiment.”

“Here’s the thought. Everybody concedes that the truck is a tremendous factor in bringing down and keeping down the cost of living. Let’s advertise that. Let’s show how trucks take seed and fertilizer out to the farmer and bring his grain and vegetables and live stock back to the market, doing it more rapidly and more cheaply than it could be done without them and reducing the cost to the ultimate consumer. Let’s show how trucks take raw materials to the factories and deliver the finished

products—to the merchant or to the railroad for a long haul. Let’s show how trucks have revolutionized the transportation of our city, lightening the work of men, multiplying many times the service to the public and bringing to people’s doors, more promptly and more cheaply than in the old horse days, the things they eat and wear and the articles that make their homes comfortable and pleasant.”

“Hm, not so bad, not so bad,” murmured Bennett, approaching the point, as he invariably did in their conversations, where he agreed with his boyhood-to-business friend.

“We could have a whole series of ads, for instance,” Reilly continued, “on the great boon to our local public in the fresh, low-priced garden and orchard products brought into our markets by trucks. The factories will help with cuts of trucks hauling foodstuffs, and we might get some pictures right here of Callawassa trucks hard at work keeping down the cost of living for Callawassa people and print the pictures.”

“It’s good-will stuff, Henry, but it’s different. Just tell the story, talking to the public instead of to prospective truck buyers, and then in smaller type in our ads have a few lines about the important features of our trucks and their adaptability to utility work.”

Bennett unfolded his hands, discovered the sartorial defect at his waistline and shoved the button into place.

“Good will,” he said, as he got up to go. “Wonderful thing, Cornelius, wonderful thing. Thought we’d overworked it, but guess we never can.”

“I’m with you on that, Henry,” Reilly concluded. “And while we’re building good will on what trucks do for humanity let’s not forget what they shouldn’t do. Let’s kick some new life into this safety council and see if we can’t save a few more of these boys and girls that have no better place to play than streets where trucks run.”

“Good will,” Reilly said to himself after Bennett had gone. “More good will for trucks, less ill will against them—when your bird is flying high and fast pull the trigger on both barrels.”



Dollar Ideas

Earn a Dollar

MOTOR WORLD will pay \$1 each for ideas for this department. The ideas should have to do with sales and business management. The idea should be in two parts:

- 1—The problem.
- 2—The solution.

But if you'll get the idea on paper in any fashion whatsoever, we shall be glad to shape it up for you. Do two things:

- 1—Help some other man.
- 2—Make a dollar for yourself.

How One Garageman Serves Hotel Guests

ARE public garage owners in all instances making the fullest effort to secure the patronage of tourists who may be passing through their city? There is a field for revenue that possibly many have been overlooking and their attention is called to the system placed in effect by the Thomas & House Automotive Co. of East St. Louis, Ill. In addition to operating a first-class garage, open night as well as day, the company has made arrangements with the hotels of the city for a unique call and delivery service without additional cost to the tourist. The hotels issue a check to the patron for his car, noting on the tag any work which is to be done upon the car during the night, such as washing, oiling, gassing, adjusting brakes, time wanted, etc. The hotel handles the garage account and charge the same as they would for laundry, apparel, telegrams, etc. The garage calls for the car when notified by the owner and de-

livers it when it is wanted. The owner need not give any concern to the car after reaching the hotel and finds this service a great convenience and the cost no greater than if he started out in quest of a plant to do needed work and provide storage. The East St. Louis company charges no more for similar service than competitors, but by making arrangements with the hotels of the city first stole a march on competitors and has thus secured considerable business that might have gone elsewhere but for their foresight. The East St. Louis firm advertises its new plan as "Service Extraordinary." Its method is referred to other garage owners for consideration in the event they have not already adopted a similar plan.

The Sign Gets Washing Jobs

"Our Wash Rack Is Clear—Drive in for Instant Service" is the wording of a hinged metal sign on the curb gas pump of Saffold Garage, Cleveland. On completing all inside jobs, the washer

steps out in the street and turns up this conspicuous sign. It is seldom more than half an hour till some motorist drives in to take advantage of this outside assurance of an undelayed washing.

Uses Scrap Book to Close Car Sales

AS a convincing argument in his closing sales talk, Holmes Simons, president of the Columbia Automotive Trade Association, uses his scrap book with good results, he says.

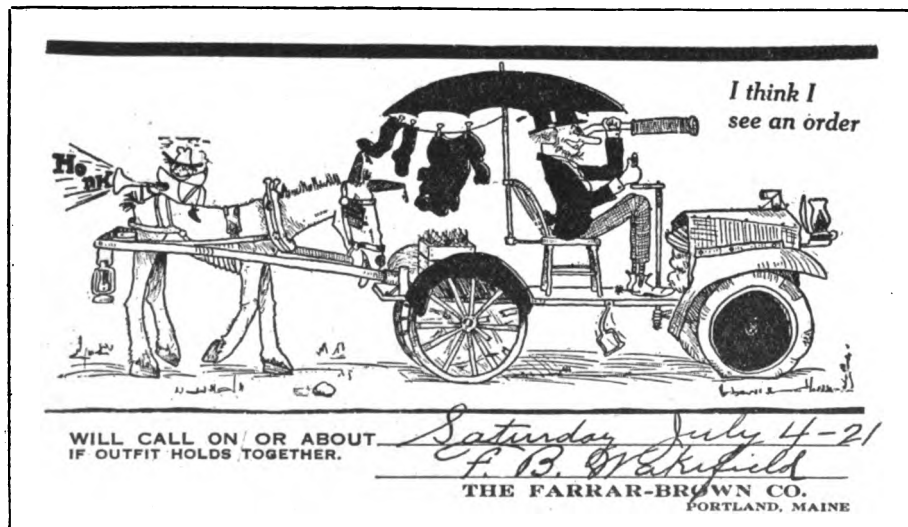
This scrap book contains newspaper clippings and advertisements which deal with the car he handles; they contain facts tersely related, and have that power to convince which the printed word carries in excess to the spoken. One of his advertisements which appears in his scrap book gives the names and street addresses of a number of men and women who have purchased the car Simons handles, and he always urges his prospects to call up these purchasers so that they may hear expressions from owners of cars.

The scrap book differs from a catalog. In its news items it gives the opinions of others about this car, and the clippings don't have that "I-was-placed-here-to-make-you-buy" air that the catalog figures possess. It is more informal than the catalog and has a sort of air of comradeship. Simons believes dealers will find a scrap book of assistance to them in selling cars, especially if they place it in reach of the prospect where he may come upon it when at leisure.

Showing Old Purchases Helps Sell

WHEN a customer has received unusual satisfaction from a more or less perishable item of equipment he will often consent to loan the same to the dealer for display after it has outlived its usefulness. E. M. Thom, Cleveland accessory dealer, has occasionally made such displays increasingly effective by showing, with the old, discarded articles, the original testimonial letters of a few satisfied purchasers. In the

It Announces the Salesman's Visit



There is a smile in this postcard which undoubtedly has a good effect in paving the way for salesman visits. It is being used by the Farrar-Brown Co., Inc., dealer and jobber supplies, Portland, Me. It ought to make a good means of keeping in touch with dealers and jobbers. Maybe you could use a postcard something like this

case of excellent articles (tires, batteries, fan belts, brake lining, etc.) which have demonstrated extreme merit, as shown in the testimonial, the letter is stamped by a notary public, with an affirming clause at the bottom. The added attraction of such letters has more than offset the time and expense of having them notarized and inserted in plain wooden frames, which are tied or wired to the articles in the show window.

Trailer Service Found Profitable by Garageman

IN spite of the large and increasing sale and use of the trailer, this off-spring of the car and truck is generally sorely neglected from the service standpoint. At the truck service station it is generally unhooked and left out in the alley, with no inquiry into its condition. If of the smaller or pneumatic-tired variety, used with a passenger car, it is usually detached and left at home when the car is taken away for service work. Except in rare instances, where the trailer factory or distributor has a service shop or contract with some established service station or repairshop in the vicinity, there is a good opportunity for the individual repair specialist or repairshop-garage to get many small jobs on trailers that nobody seems to solicit.

T. S. Randolph, East Cleveland repairshop proprietor, found 38 trailers (22 under 1-ton and 16 over 1-ton capacity) within a 2-mile radius of his shop. The owners were interviewed or written on service needs, and in a few weeks two-thirds of them stopped for at least lubrication and free inspection. Other jobs handled included wheel and rim truing and replacement, spring greasing and reinforcing, spring clip and body bolt tightening, axle truing, drawbar hook and bushing replacement and welding and wheel bearing adjustment and replacement. In Randolph's opinion, the repairshop searching for business with a fine-tooth comb draws in something besides the ubiquitous "road louse." At small charge, the motor list companies provide lists of trailers and owners in almost any district, which will be helpful in digging up this extra work.

Dealer Uses Verse to Vary Ford Ads

THE Pennell Auto Co. of Fort Wayne, Ind., has found it good business to vary the usual kind of newspaper advertisements by the use of some verse in an advertisement. This is the way the verse read:

"Ten wise men bought a different car.
And each one talked of riding far;
The mud stopped some, the cost another—
Each found his car was too much
bother.
They found that men who travel far
All drive the 'Universal Car.'
And riding far with one accord,
For all men can afford a Ford."

Customers Appreciate This Lens Sales Service

HEADLIGHT anti-glare and focusing ordinances are being so frequently passed and enforced and altered and reinforced that the legal aspects of the situation in most parts of the country make the sale of special lenses unusually brisk. A Cleveland accessory dealer, during a recent anti-glare campaign, picked four popular lenses from stock, put the same on attractive nicked lamp shells, also handled, and mounted the outfit on the counter in an improvised "shadow-box," about 45 x 22 x 15 in., made out of emptied shipping boxes.

The lamps were wired in series to a 12-volt battery under the counter, with a convenient tumbler switch in front of the box. An extra terminal leading from each lamp to a metal plate served to short various lamps when individual trial was desired. Many patrons tried out and inquired about the lenses thus displayed. Focus finder cards were furnished to customers wishing to ascertain the legality of the lenses they already had. Besides helping the sale of lenses, many sales of lamp bulbs, nicked lamps for headlight replacement, brackets, batteries, wire, switch and spotlights were directly traceable to these efforts.

Thursday, April 7, 1921. THE DAILY ARGUS-LEADER, SIOUX FALLS, S. D.

50. AUTOMOBILE SALE

Pay as You Ride
Open Evenings During This Sale

\$25,000

Automobile Stock of Stevens Overland Co., 222 and 224 North Phillips Avenue, Sioux Falls, South Dakota, consisting of used, slightly used, rebuilt, exchanged and customer's demonstrators WILL BE THROWN ON THE MARKET AND ON TERMS THAT WILL SELL AUTOMOBILES FASTER THAN GUNS HAVE EVER SOLD IN AUTOMOBILE HISTORY. THE BIG SALE IS NOW ON.

 <p>\$350 Buy This Overland</p> <p><i>The Most Durable Automobile Example</i></p>	 <p>\$150 Buy This Chevrolet</p> <p><i>Pay the Balance in Ten Months</i></p>	 <p>\$300 Buy This Buick</p> <p><i>Ready to Drive Out the Door</i></p>	 <p>\$30 Buy This Ford</p> <p><i>Here is a Different Example</i></p>
 <p>\$485 Buy This 1920 Overland</p> <p><i>Pay the Balance in Ten Months</i></p>	<p>The Most Brilliant Array of Slightly Used, Rebuilt, Exchanged Automobiles Ever Offered in the Entire Annals of Automobile Selling</p> <p style="font-size: x-small;">We have a large stock of used, slightly used, rebuilt, exchanged and customer's demonstrators of all makes and models. We are now offering them at a special price to clear our stock. This is a rare opportunity for you to get a car at a very low price. We have a large stock of used, slightly used, rebuilt, exchanged and customer's demonstrators of all makes and models. We are now offering them at a special price to clear our stock. This is a rare opportunity for you to get a car at a very low price.</p>		 <p>\$510 Buy This Overland</p> <p><i>Pay Down \$225—Balance Monthly</i></p>
 <p>One-Third Down, Pay Balance Monthly on This Car</p> <p><i>Just Think of It</i></p>	 <p>\$1500 Buy This Willys-Knight Sedan</p> <p><i>A Radiant Value</i></p>	 <p>\$500 Buy This Overland</p> <p><i>A Jewel of a Car</i></p>	 <p>\$400 Buy This Overland</p> <p><i>If We Had 10 Cents Like This We Could Buy Them in 10 Minutes</i></p>

The illustrations used are stock cuts, not actual photographs of the cars on sale—therefore to get anything like an accurate idea of the wonderful bargains on sale you should call to person.

STEVENS - OVERLAND CO.

222-224 NORTH PHILLIPS AVENUE

There are a full score of cars here that you cannot find for lack of space. If you do not see just the kind and price of car you want today—the real bargain, it is here and more than you expect for the money you want to pay.

Wouldn't You Read This Ad?

Could you use this idea in a special used car selling effort? The strength of this appeal lies particularly in the way interest is directed to ten particular cars. The illustrations used are stock cuts, but the idea might be worked out very effectively with actual pictures of the used cars. The advertisement shown occupied one entire page

Editorial Observation

Motor Truck Prosperity

ADDED force accumulates each day behind the belief that the motor truck, retarded though it has been through the after the war business readjustment, is on the threshold of a new transportation age in which it is to be a dominant factor.

The promise of a very bright future comes from many angles and from sources as varied as business itself, but best of all it comes from the motor truck industry. The past twelve months of depression have not been wasted by the industry in tears of self-pity, but instead there has been generally a minute examination of merchandising and engineering conscience and a searching for a more scientifically economical basis upon which to build the great growth that is just now getting under way.

No prediction of when prosperity will return to the motor truck industry can be made now because no definite prediction of the return of business in general can be made—but just as sure as business returns so will motor truck transportation in a greater way than ever before.

And when it does, business will reap the advantage of the months of intensive study and self-searching inquiry that the motor truck industry has indulged in since the wane of war prosperity.

One of the big advantages that business will enjoy when it gets back into the market for motor truck transportation will be the wonderfully improved facilities provided by those who sell motor trucks for the intelligent and economical adaptation of motor truck transportation. Business of the future will find the motor truck industry more sympathetic, more interested in its haulage problems, than ever before and better equipped with knowledge of those problems to assist business in meeting them. It will find this because the motor truck industry, with time on its hands to inquire more deeply into the requirements of the prospective purchaser, has climbed over on the other side and has been examining itself through the eyes of the other fellow.

Business will also find the motor truck a better unit of transportation because, hand in hand with those in the industry who have been studying what business needs most in motor truck transportation, has gone the engineer who is bending every energy into mechanical translation of those needs in motor, chassis and body combinations.

And, along with the development of the merchandising and engineering phases of fitting the motor truck into business, there has been exploded some of the fallacies of former years. Among these is the relationship of the motor truck to the railroads. Railroad men and some others who have, in the past, sought to place obstacles in the way of the development of motor truck transportation are beginning to realize that *railroads and trucks are not competitors* because with the present cost of materials, maintenance and operation, the success of railroad operation lies in **GETTING MORE LONG HAUL FREIGHT**, and the agency that **MUST bring them more of this class**

of business is motor truck transportation. The railroads are going to GET more long haul freight business, **EVEN IF THEY HAVE TO OPERATE MOTOR TRUCKS TO GET IT.** The public eventually will get the kind of transportation that is most economically satisfactory, and it will be: Railroads and the motor trucks, in close co-operation, with motor trucks carrying the short hauls and feeding the other the long hauls.

So, with a clearer vision of what business needs in motor truck transportation, with better mechanical translation of these needs and with a clearer conception of the part it is to play in the greater transportation scheme of the future, the motor truck industry is on the high road to a development as broad as business itself.

And, the man who is going to play an important part in that development—the man who is going to fit the truck into its important niche in the transportation scheme of to-morrow, the man who is going to profit by it, is the motor truck dealer who **TO-DAY** is building for the future by studying the transportation problems of his particular territory, is forming strong contacts with the industries of his territory and has his finger on his territory's business pulse with a definitely and efficiently planned business organization behind him to take advantage, from the start, of this great development.

Have Prices Reached Bottom?

PUBLISHED reports of price trends since 1914 contain strong indication that price recessions in many industries have been arrested. In fact, during one week recently more price increases than decreases were noted, which is the reverse of a situation that has existed for more than a year.

One item to which particular attention is directed is lumber and building materials, which has begun to show signs of stabilization. Building materials have taken a deflation of 139 points from their peak, as contrasted with the average deflation for all industries of 124 points, in spite of a more than normal demand for construction materials.

The railroads are now practically assured of government aid and accordingly may soon be in the market for equipment and materials they have so long needed. Heavy railroad purchase, it is agreed, will act as a strong tendencies toward straightening out in the past will affect general prices.

In nearly all commodities the price curve has shown strong tendencies toward straightening out in the past two or three weeks, and considering all factors there is strong indication that they are approaching stabilization from which must come increased confidence and a loosening of the purse strings of the great number of prospective purchasers who answer the salesman's advances to-day with:

"I'd buy if I were sure prices would not go lower in a few days."

LETTERS *from* READERS

Concerning Annual Repair Service

Editor Motor World: I am thinking of putting in an annual service on motor cars. That is, to make a flat rate for keeping cars in repair for one year, the rate to cover labor only.

If possible I would appreciate it if you could advise me the approximate amount spent by owners for labor on the various popular makes of cars for one year.

Also any suggestions or advice on this proposition will assist me in getting out my chart.

I think it would be advisable for me to get the car twice a month, grease and inspect same fully, then make a report to the owner if any repairs are necessary. He will have to pay for parts only, the price of which we would be able to quote. Should he wish the work to be done it will be up to us under our plan to do the same, charging him for parts only. By this plan the automobile owner will know what his car is going to cost him for mechanical labor for one year; by the frequent inspections and timely repairs we will cut this down to a minimum, thereby saving ourselves a great deal of work, also saving the owner big parts bills.

Write me fully on the subject, both advantages and disadvantages to both the customers and ourselves. Thanking you for a prompt reply.—A Repair Man.

Answer: The plan which you have in mind of rendering service on cars at a fixed annual rate is interesting, and has been attempted by just a very few repairmen in the past, but we have not heard, so far, that any of these men have made out very successfully with it. Probably the reason for this is that some drivers are very careful and look over the cars frequently, keep everything well oiled and greased, and consequently their repair bills are very small.

On the other hand, there are some chaps who are very careless about driving and do not take care of anything, run the car at break-neck speed at all times and have the car in the repairshop most of the time. It is almost impossible to fix some rate that will be fair for all of these classes of drivers, and the fellow who is careful of his car and who knows that his repair bills are generally low would not be very likely to want to pay a rate which would have to be very much higher than this so that it would average up to take care of the reckless driver.

You can easily see that were a man to pay an annual rate he would not care very much whether the repairs were

large or small, as he would figure you would have to pay for them, anyway. It is something like the insurance. When a man has a car insured against theft it does not make very much difference to him whether the car is stolen or not, because he does not lose anything.

You can probably work this system out very much better by installing a lubricating and greasing service. By this we mean that the car would be brought into your shop, say, every two weeks, and would be given a thorough oiling and greasing and an inspection, which would disclose any faults which might need attention. When these faults were called to the attention of the owner he could have them done or not, as he chose, but in any event the work would be done at a price entirely outside of your regular schedule for lubrication and inspection.

We doubt very much whether the average owner would want to go into a proposition of repairs on a fixed annual basis. If you were able to sell him on the plan, of course, you would have to collect the money in advance, unless you knew the man pretty well, because otherwise, if he did not have many repairs during the year, toward the end of the year he would simply clear out and go some place else and say he didn't need any repairs, anyway.

It seems to us that it would be a little risky financially to embark on an enterprise of this kind without considering thoroughly all the points involved.

Trade Literature

Simplified Guide to Correct Automobile Wiring. Price \$12.50. Published by the Automobile Engineering Co., 14 West Washington Street, Chicago.

The diagrams in this volume are made from factory blue prints. The internal connections of more than 400 types of devices used in the starting, lighting and ignition systems are also shown. There is also some material on maintenance and general electrical principles. The book is of the loose-leaf type and the diagrams are printed on strong kraft paper. The size is 6 in. by 10 in. A special volume of internal wiring only is sold for \$5.

Red Book of Sizes of Thermoid Products, Thermoid Rubber Co., Trenton, N. J. The data covered by this booklet consists of a complete compilation of information covering brake lining, clutch disks, cone clutches, radiator hose and Thermoid Hardy disk sizes. Its 150 pages are devoted in the main to tables of specifications covering these products.

A Letter on Salesmanship

Editor Motor World: I want to write an experience that happened to me along the lines of classes of dealers. I wanted to get a can of tire paint, the good one, known as ——. It is the only one I know because I had seen it advertised and on the shelves of a number of jobbers. While driving around New York I canvassed several stores and garages trying to find a can, but could find no one who had it in stock. Their answer to my inquiry was that they did not have it, and, in an indifferent attitude of "take it or leave it," they told me of something that answered the same purpose.

Being a type of man who believes he knows what he wants, I did not buy. In despair I finally went to a big outfit of which I do not think much, where I thought I could get what I wanted. The salesman told me they had no ——, but he certainly sold me a can of tire paint and it took him fifteen minutes to do it, because I made him extend himself to make the sale.

I wanted to listen to him, and I finally paid the same price for the substitute as I would have paid had I secured what I wanted. In addition to the tire paint, he sold me a can of non-squeak oil and got a dollar for it.

The point I want to make is that these people are shrewd enough to hire salesmen who, when a customer comes in the door, sell him if they have an article anything like what the customer asks for, even though it is not the same brand. They argue that the customer came in to be sold and they are alert and up on their toes to get the money.

A great many dealers and garages could improve in this respect. I say it isn't up to the manufacturer to murder these fellows or to refuse to consider them as dealers, but it is up to the jobbers and the dealers themselves to speed up their sales forces and get what business there is and not let it go away from them and into the hands of the fellow who realizes that it is as necessary to have real salesmen to sell accessories as it is to have low prices.

The day is here when people get what they want; they do not have to take what is handed over the counter to them. It is a question of salesmanship now.—Easterer.

Likes Better Mechanics Articles

Editor Motor World: The Repairshop Shortcuts and Better Mechanics departments that you mention are a fine thing and a great help. I hope that you never discontinue them.—P. H. Redgrave, Standard Oil Sanatorium, Colfax, Cal.

A Department of

BETTER MECHANICS

Conducted by J. HOWARD PILE

No. 207

When asking for information, please state whether you maintain a permanent file of Motor World, as many inquiries are answered by reference to previous issues

Time Estimates on Studebaker Repair Operations

Factory Has Worked Out a Complete System with Forms, Schedules and Instructions for Keeping Accounts Which Makes It Possible to Estimate on Time and Parts Both, Giving the Customer an Estimate to the Penny

Part III—List of Parts Needed for Each Operation

THE following list gives the parts needed for each of the operations which were listed in the Aug. 31 issue of Motor World. In many cases it will not be found necessary to replace *all* of the parts which are given, but only some of them. Where some of the old parts

are used again, the selling price of these parts, which have been included in the original estimate, can be deducted from the customer's invoice, thus making the job cost less than the estimate, or if the estimates are made closer, the customer can be billed the flat rate regardless and

the profits and losses on the various jobs pooled. This depends on the system in use in the individual shop. The shop system devised by the Studebaker Corp. for handling the jobs was given in the issue of Aug. 24 and the list of labor operations in the issue of Aug. 31.

List of Parts for Single Operations

OPERATION			SERIES 19 FOUR	
No.	Quantity	Part No.	Name of Parts	
Group A				
1	2	32021	Steering knuckle pin.	
	2	31988	Fr. axle upper bushing.	
	2	31990	Fr. axle lower bushing.	
2	2	32008	Cross tube clevis bolt.	
	2	32036	Steering knuckle arm bushing.	
3			No parts required.	
4	1	32002	Steering cross tube.	
5			No parts required.	
6	1	32015	Steering knuckle.	
		or		
		32016		
7	1	32019	Thrust washer.	
8	1	31988	Fr. axle upper bushing.	
	1	31990	Fr. axle lower bushing.	
	1	32036	Steering knuckle arm bushing.	
9	1	31984	Front axle with bushing.	
10			No parts required.	
11	2	32008	Cross tube clevis bolt.	
	2	32036	Steering K. arm bushing.	
	2	32021	Steering K. pin.	
	2	31988	Fr. axle upper bushing.	
	2	32036	Fr. axle lower bushing.	

OPERATION			SERIES 19-20 LIGHT & SPECIAL SIX	
No.	Quantity	Part No.	Name of Parts	
Group A				
1	2	32022	Steering knuckle pin.	
	2	31989	Fr. axle upper bushing.	
	2	31991	Fr. axle lower bushing.	
2	2	32009	Cross tube clevis bolt.	
	2	32037	Steering knuckle arm bushing.	
3			No parts required.	
4	1	32003	Steering cross tube.	
5			No parts required.	
6	1	32017	Steering knuckle.	
		or		
		32018		
7	1	32020	Thrust washer.	
8	1	31989	Fr. axle upper bushing.	
	1	31991	Fr. axle lower bushing.	
	1	32037	Steering knuckle arm bushing.	
9	1	31985	Front axle with bushing.	
10			No parts required.	
11	2	32009	Cross tube clevis bolt.	
	2	32037	Steering K. arm bushing.	
	2	31989	Fr. axle upper bushing.	
	2	31991	Fr. axle lower bushing.	
	2	32022	Steering K. pin.	

OPERATION			SERIES 19-20 BIG SIX	
No.	Quantity	Part No.	Name of Parts	
Group A				
1	2	32022	Steering knuckle pin.	
	2	31989	Fr. axle upper bushing.	
	2	31991	Fr. axle lower bushing.	
2	2	32009	Cross tube clevis bolt.	
	2	32037	Steering knuckle arm bushing.	
3			No parts required.	
4	1	32003	Steering cross tube.	
5			No parts required.	
6	1	32017	Steering knuckle.	
		or		
		32018		
7	1	32020	Thrust washer.	
8	1	31989	Fr. axle upper bushing.	
	1	31991	Fr. axle lower bushing.	
	1	32037	Steering knuckle arm bushing.	
9	1	31985	Front axle with bushing.	
10			No parts required.	
11	2	32009	Cross tube clevis bolt.	
	2	32037	Steering K. arm bushing.	
	2	31989	Fr. axle upper bushing.	
	2	31991	Fr. axle lower bushing.	
	2	32022	Steering K. pin.	

List of Parts for Single Operations

Operation No.	Quant.	Part No.	SERIES 19 FOUR Name of Parts	Operation No.	Quant.	Part No.	SERIES 19-20 LIGHT & SPECIAL SIX Name of Parts	Operation No.	Quant.	Part No.	SERIES 19-20 BIG SIX Name of Parts
Group B				Group B				Group B			
1	1	32227	Gear and pinion matched.	1	1	30685 or 30687	Gear and pinion matched.	1	1	30685 or 30687	Gear and pinion matched.
	1	31736	Pinion carrier gasket.		1	31737	Pinion carrier gasket.		1	31737	Pinion carrier gasket.
	1	31755	Housing cover gasket.		1	31756	Housing cover gasket.		1	31756	Housing cover gasket.
			$\frac{1}{2}$ gal. trans. oil.				$\frac{1}{2}$ gal. trans. oil.				$\frac{1}{2}$ gal. trans. oil.
2			No parts required.	2			No parts required.	2			No parts required.
8	1	31696	Pinion shaft fr. brg. cone.	3	1	30052	Pinion shaft fr. brg. cone.	3	1	30052	Pinion shaft fr. brg. cone.
	1	9154	Pinion shaft fr. brg. cup.		1	4377	Pinion shaft fr. brg. cup.		1	4377	Pinion shaft fr. brg. cup.
	1	9173	Pinion shaft rear brg. cone.		1	623	Pinion shaft rear brg. cone.		1	623	Pinion shaft rear brg. cone.
	1	9172	Pinion shaft rear brg. cup.		1	30330	Pinion shaft rear brg. cup.		1	30330	Pinion shaft rear brg. cup.
	1	31736	Pinion carrier gasket.		1	31737	Pinion carrier gasket.		1	31737	Pinion carrier gasket.
			$\frac{1}{2}$ gal. trans. oil.				$\frac{1}{2}$ gal. trans. oil.				$\frac{1}{2}$ gal. trans. oil.
4	1	31679	Rear axle pinion 4.36 to 1.	4	1	31680	Rear axle pinion shaft.	4	1	31680	Rear axle pinion shaft.
	1	31736	Pinion carrier gasket.		1	31737	Pinion carrier gasket.		1	31737	Pinion carrier gasket.
			$\frac{1}{2}$ gal. trans. oil.				$\frac{1}{2}$ gal. trans. oil.				$\frac{1}{2}$ gal. trans. oil.
5	1	9157	Shaft bearing cup.	5	1	30330	Shaft bearing cup.	5	1	30330	Shaft bearing cup.
	1	31661	Shaft bearing cone.		1	31662	Shaft bearing cone.		1	31662	Shaft bearing cone.
			$\frac{1}{2}$ gal. trans. oil.				$\frac{1}{2}$ gal. trans. oil.				$\frac{1}{2}$ gal. trans. oil.
6	1	9151	Differential bearing cup.	6	1	9151	Differential bearing cup.	6	1	9151	Differential bearing cup.
	1	31725	Differential bearing cone.		1	31725	Differential bearing cone.		1	31725	Differential bearing cone.
			$\frac{1}{2}$ gal. trans. oil.				$\frac{1}{2}$ gal. trans. oil.				$\frac{1}{2}$ gal. trans. oil.
7	1	9151	Differential bearing cup.	7	1	9151	Differential bearing cup.	7	1	9151	Differential bearing cup.
	1	31725	Differential bearing cone.		1	31725	Differential bearing cone.		1	31725	Differential bearing cone.
8	1	31710	Differential case.	8	1	31711	Differential case.	8	1	31711	Differential case.
	6	32622	Rear axle gear bolt.		6	24429	Rear axle gear bolt.		6	24429	Rear axle gear bolt.
			$\frac{1}{2}$ gal. trans. oil.				$\frac{1}{2}$ gal. trans. oil.				$\frac{1}{2}$ gal. trans. oil.
9	1	31718	Differential cross.	9	1	31719	Differential cross.	9	1	31719	Differential cross.
	4	31720	Differential pinions.		4	31721	Differential pinions.		4	31721	Differential pinions.
			$\frac{1}{2}$ gal. trans. oil.				$\frac{1}{2}$ gal. trans. oil.				$\frac{1}{2}$ gal. trans. oil.
10	1	31718	Differential cross.	10	1	31719	Differential cross.	10	1	31719	Differential cross.
	4	31720	Differential pinions.		4	31721	Differential pinions.		4	31721	Differential pinions.
			Differential brg. cup.				Differential brg. cup.				Differential brg. cup.
10	1	31725	Differential brg. cone.	10	1	31725	Differential brg. cone.	10	1	31725	Differential brg. cone.
	1	31722	Differential gear.		1	31723	Differential gear.		1	31723	Differential gear.
			$\frac{1}{2}$ gal. trans. oil.				$\frac{1}{2}$ gal. trans. oil.				$\frac{1}{2}$ gal. trans. oil.
			No parts required.				No parts required.				No parts required.
12	1	31748	Rear axle housing complete.	12	1	31749	Rear axle housing complete.	12	1	31749	Rear axle housing complete.
	1	31736	Pinion carrier gasket.		1	31737	Pinion carrier gasket.		1	31737	Pinion carrier gasket.
			$\frac{1}{2}$ gal. trans. oil.				$\frac{1}{2}$ gal. trans. oil.				$\frac{1}{2}$ gal. trans. oil.
13	1	32783	Rear axle shaft with plug.	13	1	32784	Rear axle shaft with plug.	13	1	32784	Rear axle shaft with plug.
	1	6x49	Cotter key.		1	6x49	Cotter key.		1	6x49	Cotter key.
	1	36220	Rear axle shaft key.		1	36219	Rear axle shaft key.		1	36219	Rear axle shaft key.
			$\frac{1}{2}$ gal. trans. oil.				$\frac{1}{2}$ gal. trans. oil.				$\frac{1}{2}$ gal. trans. oil.
Group C				Group C				Group C			
1	1	31784	External brake band lining.	1	1	31785	External brake band lining.	1	1	31785	External brake band lining.
20		35619	Rivets.	26		35619	Rivets.	26		35619	Rivets.
2	1	31808	Internal brake band lining.	2	1	31809	Internal brake band lining.	2	1	31809	Internal brake band lining.
24		35620	Rivets.	26		35620	Rivets.	26		35620	Rivets.
3	1	31784	External brake band lining.	3	1	31785	External brake band lining.	3	1	31785	External brake band lining.
20		35619	Rivets.	26		35619	Rivets.	26		35619	Rivets.
1		31808	Internal brake band lining.	1		31809	Internal brake band lining.	1		31809	Internal brake band lining.
24		35620	Rivets.	26		35620	Rivets.	26		35620	Rivets.
4	1	14554	Brake release bracket screw.	4	1	14554	Brake release bracket screw.	4	1	14554	Brake release bracket screw.
	1	14555	Brake release bracket screw nut.		1	14555	Brake release bracket screw nut.		1	14555	Brake release bracket screw nut.
5	1	31812	Internal brake cam.	5	1	31812	Internal brake cam.	5	1	31812	Internal brake cam.
6	1	31775	Brake cam shaft bushing.	6	1	31775	Brake cam shaft bushing.	6	1	31775	Brake cam shaft bushing.
7			No parts required.	7			No parts required.	7			No parts required.
8			No parts required.	8			No parts required.	8			No parts required.
Group D				Group D				Group D			
1	2	18377	Door bumpers.	1	2	18377	Door bumpers.	1	2	18377	Door bumpers.
2	1	17350	Door hinge complete.	2	1	17350	Door hinge complete.	2	1	17350	Door hinge complete.
3			No parts required.	3			No parts required.	3			No parts required.
Group E				Group E				Group E			
1	1	26380	Needle valve (Schebler).	1	1	31741	Float valve assy. (Ball & Ball).	1	1	31741	Float valve assy. (Ball & Ball).
	1	11951	Needle valve seat (Schebler).		1		Float valve assy. (Stromberg).				
2	1	11965	Float (Schebler).	2	1	31740	Float (Ball & Ball).	2	1	31740	Float (Ball & Ball).
	1	39177	Float (Stromberg).								
3	1	11932	Float chamber gasket (Schebler).		1	39177	Float (Stromberg).				
4	1	1380	Intake manifold lower gasket.	4	1	1380	Intake manifold lower gasket.	4	1	1380	Intake manifold lower gasket.

List of Parts for Single Operations

SERIES 19 FOUR			SERIES 19-20 LIGHT & SPECIAL SIX			SERIES 19-20 BIG SIX		
Operation No.	Quantity	Part No. Name of Parts	Operation No.	Quantity	Part No. Name of Parts	Operation No.	Quantity	Part No. Name of Parts
Group F			Group F			Group F		
1	4	32322 Front spring bushing.	1	4	853 Front spring bushing.	1	4	853 Front spring bushing.
6		32323 Front spring bolt.	6		32955 Front spring bolt.	6		32955 Front spring bolt.
6		6x43 Cotter keys.	6		6x43 Cotter keys.	6		6x43 Cotter keys.
2	2	32925 Rear spring bushing front.	2	2	32925 Rear spring bushing front.	2	2	32925 Rear spring bushing front.
2		32926 Rear spring bushing rear.	2		32926 Rear spring bushing rear.	2		32926 Rear spring bushing rear.
2		32951 Rear spring front bolt.	2		32951 Rear spring front bolt.	2		32951 Rear spring front bolt.
4		32952 Rear spring rear bolt.	4		32954 Rear spring rear bolt.	4		32954 Rear spring rear bolt.
2		6x45 Cotter Keys.	2		6x45 Cotter Keys.	2		6x45 Cotter Keys.
4		6x43 Cotter keys.	4		6x43 Cotter keys.	4		6x43 Cotter keys.
3	2	6x45 Cotter keys.	3	2	6x45 Cotter keys.	3	2	6x45 Cotter keys.
4		6x43 Cotter keys.	4		6x43 Cotter keys.	4		6x43 Cotter keys.
4	1	32323 Front spring bolt.	4	1	32955 Front spring bolt.	4	1	32955 Front spring bolt.
4	1	6x43 Cotter key.	4	1	6x43 Cotter key.	4	1	6x43 Cotter key.
5	1	32952 Rear spring rear bolt.	5	1	32954 Rear spring rear bolt.	5	1	32954 Rear spring rear bolt.
2		6x43 Cotter keys.	2		6x43 Cotter keys.	2		6x43 Cotter keys.
6		Not furnished for 4-cylinder.	6	1	32920 Rear snubber and bracket, right.	6	1	32920 Rear snubber and bracket, right.
			1		32942 Rear snubber and bracket, left.	1		32942 Rear snubber and bracket, left.
			1		32921 Front snubber and bracket, right.	1		32921 Front snubber and bracket, right.
			1		32943 Front snubber and bracket, left.	1		32943 Front snubber and bracket, left.
7	1	32314 Front spring.	7	1	32915 Front spring.	7	1	32915 Front spring.
1		32323 Front spring bolt.	1		32955 Front spring bolt.	1		32955 Front spring bolt.
2		6x43 Cotter keys.	2		6x43 Cotter keys.	2		6x43 Cotter keys.
8	1	32325 Rear spring.	8	1	32327 Rear spring.	8	1	32326 Rear spring.
1		32952 Rear spring rear bolt.	1		32954 Rear spring rear bolt.	1		32954 Rear spring rear bolt.
2		6x43 Cotter keys.	2		6x43 Cotter keys.	2		6x43 Cotter keys.
9		No parts required.	9		No parts required.	9		No parts required.
10		Graphite.	10		Graphite.	10		Graphite.
Group G			Group G			Group G		
1	1	32254 Clutch cone facing.	1	1	9593 Clutch cone facing.	1	1	9593 Clutch cone facing.
12		75x10 Facing rivets.	12		75x10 Facing rivets.	12		75x10 Facing rivets.
2	1	32279 Clutch shifter bearing.	2	1	32280 Clutch shifter bearing.	2	1	32280 Clutch shifter bearing.
1		32292 Oil washer.	1		32287 Oil washer.	1		32287 Oil washer.
3	1	35562 Clutch brake arm facing.	3	1	35562 Clutch brake arm facing.	3	1	35562 Clutch brake arm facing.
2		46x3 Clutch brake arm facing rivets.	2		46x3 Clutch brake arm facing rivets.	2		46x3 Clutch brake arm facing rivets.
4	1	17704 Clutch brake arm spring.	4	1	17704 Clutch brake arm spring.	4	1	17704 Clutch brake arm spring.
5	1	32265 Clutch driving disc outer hub.	5	1	32265 Clutch driving disc outer hub.	5	1	32265 Clutch driving disc outer hub.
8		6x15 Cotter keys.	8		6x15 Cotter keys.	8		6x15 Cotter keys.
6	1	32256 Clutch drive shaft.	6	1	32257 Clutch drive shaft.	6	1	32257 Clutch drive shaft.
8		6x15 Cotter keys.	8		6x15 Cotter keys.	8		6x15 Cotter keys.
7	1	9049 Clutch engaging spring.	7	1	35588 Clutch engaging spring.	7	1	35588 Clutch engaging spring.
8		6x15 Cotter keys.	8		6x15 Cotter keys.	8		6x15 Cotter keys.
1		6x45 Cotter keys.	1		6x45 Cotter keys.	1		6x45 Cotter keys.
8	1	5908 Clutch thrust bearing stud.	8	1	5908 Clutch thrust bearing stud.	8	1	5908 Clutch thrust bearing stud.
1		6x45 Cotter key.	1		6x45 Cotter key.	1		6x45 Cotter key.
8		6x15 Cotter keys.	8		6x15 Cotter keys.	8		6x15 Cotter keys.
9	1	10213 Clutch thrust bearing.	9	1	10213 Clutch thrust bearing.	9	1	10213 Clutch thrust bearing.
1		6x45 Cotter key.	1		6x45 Cotter key.	1		6x45 Cotter key.
8		6x15 Cotter keys.	8		6x15 Cotter keys.	8		6x15 Cotter keys.
10	1	32871 Clutch shifter shaft fork.	10	1	32871 Clutch shifter shaft fork.	10	1	32871 Clutch shifter shaft fork.
1		6x45 Cotter key.	1		6x45 Cotter key.	1		6x45 Cotter key.
11	1	32534 Clutch shifter shaft lever.	11	1	32534 Clutch shifter shaft lever.	11	1	32534 Clutch shifter shaft lever.
Group H			Group H			Group H		
1	1	17408 Radiator inlet hose.	1	1	32716 Radiator inlet hose.	1	1	17408 Radiator inlet hose.
2	1	16877 Water pump outlet hose.	2	1	16877 Water pump outlet hose.	2	1	16877 Water pump outlet hose.
3	1	16731 Water header.	3	1	16732 Water header.			
1		16901 Water header gasket.	1		17417 Water header gasket.			
7		5960 Water header stud gasket.	9		5960 Water header stud gasket.			
1		36235 Radiator outlet hose.	1		36235 Radiator outlet hose.			
4	1	16901 Water header gasket.	4	1	16901 Water header gasket.			
7		5960 Water header stud gasket.	9		5960 Water header stud gasket.			
1		36235 Radiator outlet hose.	1		36235 Radiator outlet hose.			

(Continuation of this table on page 29)

STUDEBAKER FLAT RATE PLAN

Part I—Forms and Workings of the System appeared in the August 24 issue. Part II—Group Operations and Labor Time Appeared Last Week. The List of Parts for Single Operations and List of Parts for Combined Operations Will Be Continued Next Week.

Repairshop Shortcuts

No. 3034—Emergency Battery Connection.—If a battery connector becomes loose and there are no burning facilities at hand, an emergency connection may be made by drilling two holes, partly in the post and partly in the connector and driving soft copper rivets in till they swell.—H. D. Maxwell, Pink Hill, N. C.

No. 3035—Paint Spraying for Wire Wheels.—Wire wheels are painted rapidly and thoroughly with a paint sprayer, a hood and an electric fan, the draft carrying off the excess spray and drying the paint. The wheel is mounted on a stand.—Henry M. Holt, Willys-Overland, Inc., New York City.

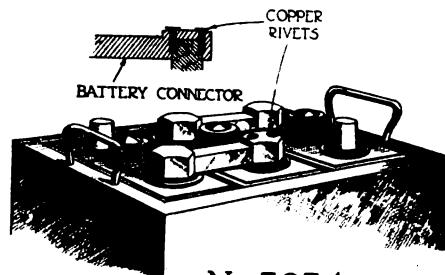
No. 3036—Ford Starting Crank Sleeve Tools.—The driver is made from an old axle shaft, turned down at one end to enter the hole, the shoulder driving the sleeve. The new sleeve is pulled in with a bolt and threaded block.—Herbert A. Fiske, H. A. Fiske Garage, New Bedford, Mass.

No. 3037—Locking a Nut.—A nut is locked by slitting the end of the bolt with a hack saw and spreading the ends. The nut can be removed by bending the ends in again.—Lee B. Clark, S. & C. Garage, Vici, Okla.

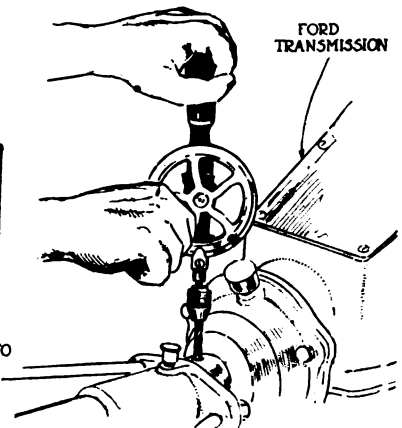
No. 3038—Removing Ford Drive Shaft Pin.—Where the pin is burred or riveted, a $\frac{1}{8}$ -in. drill worked into one end of the pin will remove the burr and the pin can be driven out from that side in the usual way.—L. M. Bussey, Boones Mill Motor Co., Boones Mill, Va.

No. 3039—Borg & Beck Clutch Cover Removal.—Blocks of wood are placed between the bearing and the clutch cover while the cap screws are removed, the block taking the thrust of the spring. The blocks may be left in this position until the clutch is assembled again.—R. G. Dasse, Burlington, Vt.

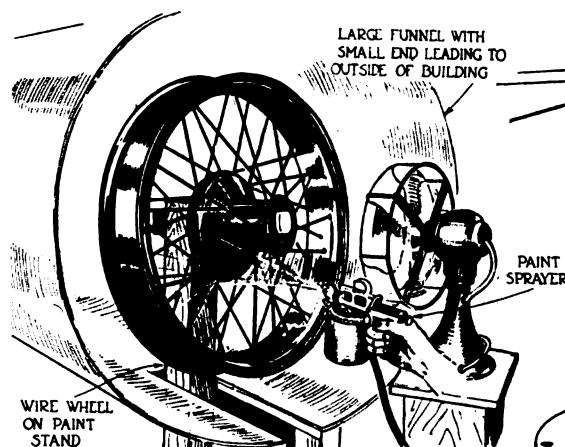
No. 3040—Universal Puller for Chevrolet.—The block of the puller is made of 1 7/16-in. square stock turned down to 1 in. diameter at the ends for $\frac{3}{4}$ in. The hole is drilled and tapped $\frac{3}{4}$ in. and the bolt is 4 in. long. This is bolted in the universal and the long bolt pushes the shaft out.—Charles R. Simmons, Chevrolet Motor Co., New York City.



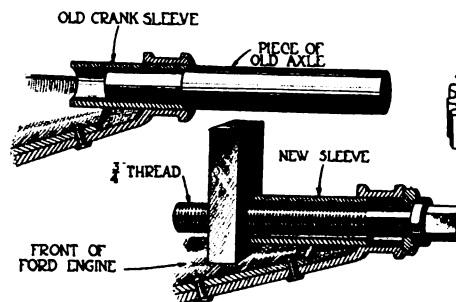
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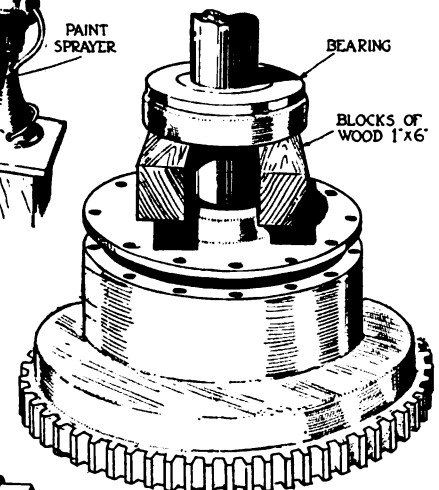
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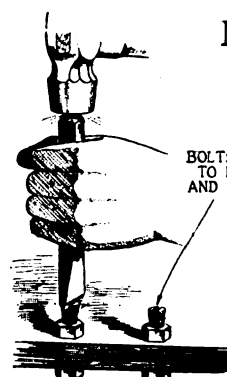
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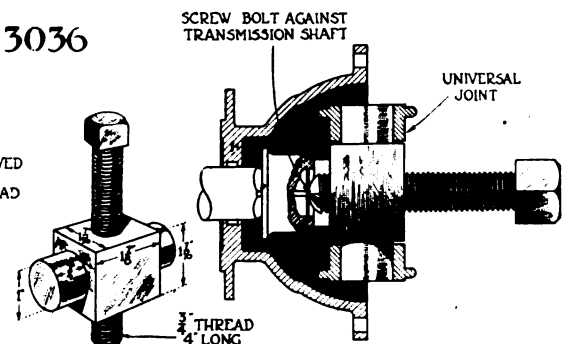
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No 3039



No. 3037



No 3040

MAKE A DOLLAR

SEND in a sketch and description of the device you doped out to make your work easier. Motor World will pay a dollar for every idea accepted for publication.

THE LAW

By GEORGE F. KAISER

Perplexed?

Does some point of law perplex you?
Why don't you ask MOTOR WORLD's legal editor to discuss the question?

Garageman Forfeits Lien with Possession, Court Holds

That a garageman gives up his lien on his car for repairs when he parts with possession of it and that he cannot reassert such lien unless the car is restored to his possession by one authorized to restore it and that it is an unlawful seizure to repossess a car driven into a garage for oil by its chauffeur was the recent decision in *Owl Wet Wash Laundry Co. against Karish*, reported in 188 New York Supplement at Page 782.

It appeared that the laundry brought an action in replevin to recover possession of a motor truck held by Karish under the claim of a lien for repairs. Karish counter-claimed for the alleged value of the repairs, and set up as a defense that he held the car by virtue of his lien for such repairs.

Prior to June 22, 1920, Karish made certain repairs upon the truck at the laundry's request, and the truck was voluntarily delivered to the laundry on June 22, 1920, before any bill was presented for repairs; Karish testifying that he extended credit to the laundry for the bill. Four days later, while the truck was in possession temporarily of one Cushman, a third party, it was driven into Karish's garage by Cushman for the sole purpose of obtaining oil to relieve knocking in the motor. Karish immediately seized the truck, ordered the chauffeur out, told him he would hold it until the repair bill was paid and refused to surrender it until the marshal took possession under the replevin writ.

The court said: "There are two questions raised upon this appeal: First, that Karish had no lien upon the truck at the time of the seizure; and, second, that the judgment for \$190.74 in favor of Karish was not based upon sufficient evidence. As to the latter proposition, the sole testimony is that of Karish, who stated that he 'went over the motor, removed it from the chassis, fixed the transmission, clutch, and universal all in good order.' He testified that he spent two weeks, of 48 hours each, on the machine. On cross-examination, when shown a bill of \$190.74, he stated he could not read the bill; that he spent 48 hours per week at \$1.50 per hour on the truck. He had no record of the time spent, gave no testimony that the work done or the time spent were necessary, or that the charge was reasonable and proper. It does not appear what items

made up the balance of the bill. Clearly, there was not proof upon which to base Karish's recovery upon his counter claim." *Granier v. DeMarco* (Sup.) 181 N. Y. Supp. 258.

As to the lien of Karish upon the laundry's truck it is obvious that Karish had waived or relinquished his lien by his unconditional parting with the possession of the car. He could not reassert this lien, unless the car was restored to his possession by one authorized to do so. An unlawful seizure of a car, it has been held, will not give to the garage keeper possession that can be made the basis of a lien. *Greene v. Fankhauser* 137 App. Div. 124, 121 N. Y. Supp. 104. Karish herein had no lawful possession of the car in suit, and no lien. The complaint was erroneously dismissed.

Judgment was reversed with \$30 costs. *Owl Wet Wash Laundry v. Karish*, 188 N. Y. S. page 782 (N. Y.)

Motor Laws Made While You Wait!

Editor Motor World: Regarding tail light. My tail light was burning when I started up my car and when I had driven less than two blocks I was stopped by the officer and sworn at, and he asked me where I was going. When I asked him what the trouble was he told me to appear before the police judge the next morning, which I did. They could not find a law to fine me; so they told me to go. About five hours after I left the court called me by phone and told me to appear again at once. They showed me a typewritten law the city attorney had made up in the meantime and fined me \$5 and costs, total \$8. Can they make a law and fine me when they had no law when they arrested me?—W. W. W., Plattsmouth, Neb.

Answer: You remember the story about the lawyer who went to visit his client in jail and on hearing his story became highly indignant and exclaimed, "They can't put you in jail—they can't put you in jail." I feel like saying, "they can't fine you—they can't fine you"—but they have already done it. It was done illegally and improperly, however, and I suggest you appeal. Of course, we can't represent you in court. Only a local lawyer can do that. If the police judge and city attorney are democrats retain a good republican or vice versa, as election day is drawing near.

Not Responsible for Fire Caused by Boy

The Supreme Court of Iowa recently held, in the case of *Pierce against the Liberty Oil Co.*, that where a gasoline filling station caught fire on account of the negligence of the son of an employee in charge, the owner was not responsible for damages done to adjoining property by reason of negligence in having a gasoline lamp for lighting purposes instead of electric lighting; the act of a third party was the cause of the injury.

The action to recover damages was sustained by the destruction by fire of a portion of a crop of growing cherries. The cherries were growing in an orchard situated on land adjoining the ground occupied by the Liberty Oil Co.'s filling station. The filling station was consumed by fire, and the heat and flames destroyed the cherries.

Pierce was a tenant on the farm of J. R. Rittgers, located near the Hyperion Club in Polk County. In accordance with the terms of his lease, Pierce was entitled to the cherries in controversy. Liberty Oil Co. was also a tenant on the Rittgers land, and occupied a tract of land adjoining that occupied by Pierce, and near the orchard where the cherries in controversy were growing. Liberty Oil Co.'s filling station was destroyed by fire on May 25, 1919. The court held the filling station owner need not pay for the loss of the cherries. *Pierce v. Liberty Oil Co.*, 183 N. W. page 437 (Iowa).

The Illinois Lien Law

Editor Motor World: We note in the issue of Motor World dated July 6 that the Illinois law giving garage men a lien for storage on motor vehicles was held to be unconstitutional by the Supreme Court of Illinois.

We are anxious to read the decision of the court in this case, and will thank you, if possible, to furnish us the style of the case, and the page and volume number of the N.E. Reporter on which it can be found.—A. T. B., Dallas, Texas.

Answer: The case you want to know about is the case of *Thurber Art Galleries vs. Rienzi*, 130 Northeastern Reporter, page 747. In this case the Illinois Garage Keeper's Lien Act, Sec. 3a-3c was held to be unconstitutional. The Chicago Garage Owners Association will be glad to give you any information about the facts of this case that you cannot find in the court's opinion.

SYSTEM IN BUSINESS

This Department Is Intended to Assist Motor World Readers in Working Out Their System Problems—It Will Answer Questions Concerning System and Accounting

Some Questions on the Motor World System

Unusual Entries That Users of the System Have Sought Advice on Explained.

Accounting for Petty Cash

Editor Motor World: Using your accounting system, kindly advise me how to handle the daily deposits to the bank and how the petty cash is balanced daily.—M. B. G.

Answer—All cash received is entered daily in the column bearing that name on Form 1. The total of this column for each day should be the amount that you deposit in the bank and should correspond with your bank book.

In regard to petty cash, if you carry, say \$25, this can be balanced at any time by simply adding the items in the petty cash box and the total should always be \$25. For example, on Monday there were \$25 in the box and during the day \$1 was spent for carfare. A memorandum should be placed in the box saying "Carfare, General Department, \$1." At the end of the day, there would be \$24 and a memorandum for \$1 in the box.

This process would be continued until say \$24 of the cash had been taken from the box and replaced by memoranda. A check for \$24 would be drawn and cashed and the money placed in the petty cash box. This check is entered as a credit in the usual manner on Form 2. The debit entries are made in the various expense columns from the memoranda in the petty cash box.

Two Trade-In Transactions

Editor Motor World: Will you kindly explain how the following entries are made in the Motor World system:

1—Brown buys a new car for \$2,000, trades in a used car at \$1,000, pays \$500 cash and gives a note for \$500 for the balance.

2—Black trades in a used car for two used cars, the trade being even.—F. H. B.

Answer—The entry of the transactions given above would be made as follows:

1—An entry for \$2,000 would be made in the Car Sales column on Form 1. The value of the trade-in car would be charged under All Other Accounts to the Used Car Stock account. The cash received is entered under All Cash Received with an explanation as to its source. The \$500 note is entered under All Other Accounts to a Notes Receivable account with an explanation that the

item covers Brown's note. This latter entry is later transferred to a sheet headed Notes Receivable, which is carried in the alphabetically indexed portion at the rear of the book.

2—The first step in the entry of this transaction is to put money values on the three used cars involved. Suppose the car delivered is valued at \$1,000 and the two received are appraised at \$400 and \$600 respectively. A used car sale of \$1,000 is entered in the Car Sales column on Form 1, and this entry is offset by debits of \$400 and \$600 under All Other Accounts to the Used Car Stock account.

Invoice of Stock Purchase

Editor Motor World: In buying accessories for stock, it very frequently happens that we do not receive the invoice until two or three days after making the purchase. Should these items be entered on the day we receive the accessories? Is the amount for these items left open and filled in later when we receive the invoice?—P. R. D.

Answer—Invoices for accessories, supplies, purchase of stock, may or may not be entered daily, but we suggest that you wait until the end of the month until you have received a statement of your account covering these purchases made during the month and, after checking the statement with the invoices, that you make one entry covering the entire purchases for the month, charging the same to stock with notations as to how the amount is distributed between accessories, tires and tubes, etc. These entries are made on Form 2. The entry showing the total amount payable is entered under Payable to Jobbers, Mfrs. and others. This entry is later transferred to the accounts payable sheet.

At the end of the month, you will have to be careful that all items included in the inventory, as taken from the perpetual inventory, are covered by entries in the book. For example, if you receive a shipment of spark plugs on the last day of the month, this should not be included in the inventory unless the invoice is also entered. Unless this precaution is observed, the profit and loss statement will not be correct, nor will the inventory agree with the books.

Entering Time Purchases

Editor Motor World: Kindly explain fully what entries would be made on the Motor World form for the following purchases: A supply of bolts or nuts to be used in the repair department, invoice not paid for about two months from the date of purchase; packing for the accessory department, payment to be made three months from date of purchase.—R. G. W.

Answer—When an invoice is received for goods purchased in the current month, it is entered on Form 2, after both it and the merchandise have been checked. The net cost of the goods is debited in the stock account column and the credit is made to the account of the company from which the merchandise was bought in the column headed Payable to Jobbers, Mfrs. and others.

As far as making a permanent record, accounts of this character are treated very similarly to customers' accounts. Inasmuch as these accounts are payable, the balance will be on the credit side. The amount of the invoice should be transferred to a sheet in the alphabetically arranged section at the rear of the book. The heading of the sheet should show that the entries are for an account payable. Notation of the due date should also be made. When the bill comes due, a check is drawn and entered on Form 2 in the usual manner. This entry is transferred to the sheet in the back of the book, which wipes out the balance there.

The entry of the purchase of inexpensive material used in the shop, such as bolts and nuts, depends on conditions. If the quantity purchased is so small that it may be considered as for current consumption, the entry should be made directly to shop expense instead of putting it in stock. If the purchase is large, the entry should be a charge to stock and the quantity used charged to shop expense at the end of the month. There are two ways of billing small parts like this. One is to increase the portion of each service of bill that covers parts used by a fixed percentage and the other is to consider it as part of the shop overhead. This procedure is adopted because it is not practical to bill these small parts individually.

SCIENTIFIC CONSTRUCTION

GARAGES

SHOWROOMS

REPAIRSHOPS

Conducted by DONALD D. BLANCHARD

Will Your New Building Fit?

An Efficient Building Is a Result of Careful Consideration of the Use That Is to Be Made of It at the Time the Plans Are Drawn

A SATISFACTORY building is the result of careful planning. The needs of the business which it is to house must first be analyzed and, with the results of this analysis as a basis, the building is designed to fill the requirements as well as conditions will permit. The object in view is, of course, to erect a building that will handle a maximum of trade with a minimum operating expense. In planning a building, therefore, the foremost idea should be to provide one that will have none of the inconveniences that take the time of the employees or try the patience of the customer.

The building illustrated on this page has two stories and basement and is designed especially for handling Ford sales and service. The first floor is occupied largely by the sales and executive departments, and the second floor and basement are given over to service.

Due to the fact that the side street slopes down toward the rear of the build-

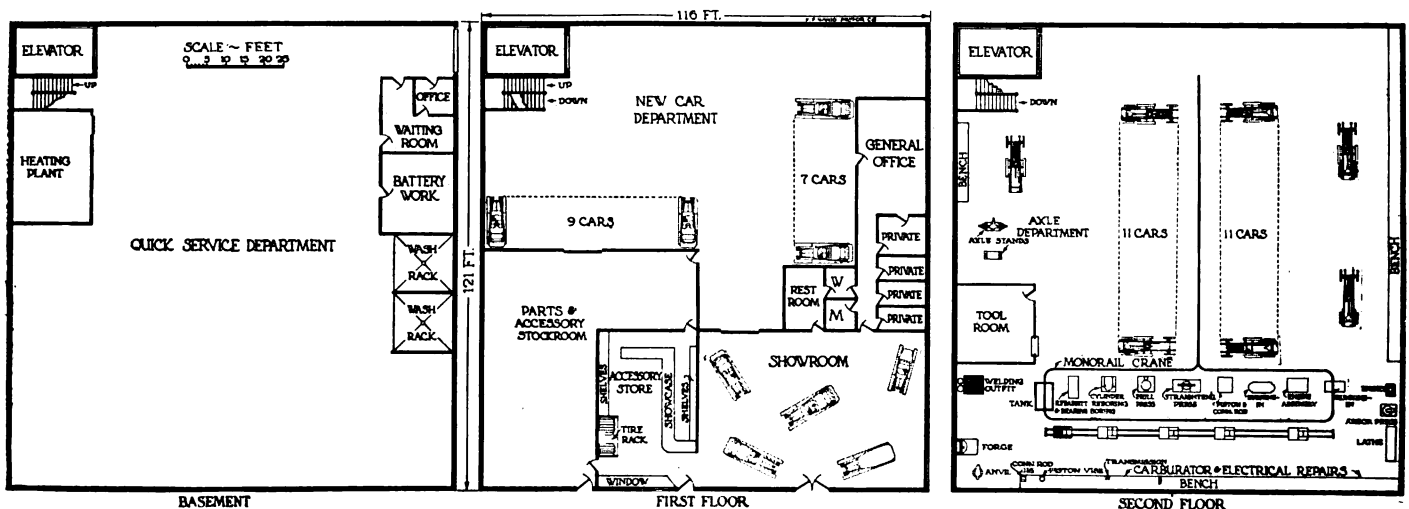
MOTOR WORLD is glad to receive and answer inquiries for garage plans, but in order that there may be as little delay as possible in submitting the plans desired it is imperative that the following information be given:

Size of plot, with rough sketch showing shape and its relation to adjoining plots; name and number of departments operated; number of cars to be shown in salesroom; number of cars in garage; any other pertinent details.

ing, it is possible to drive into the basement directly from the street. An elevator is provided for the transportation of cars to the first and second floor. The main car travel will be between the basement and the second floor and will not be nearly as heavy as if the building were a storage garage. For these reasons we

believe the elevator to be a preferable installation. The space required for a ramp would be very large as it is not possible to put the ramp to the second floor directly over the ramp to the first floor without seriously disarranging the layout on the first floor as it would be necessary to provide a path from the top of the lower ramp to the bottom of the upper one.

The car salesroom, accessory store, parts department, offices and new car department are all located on the first floor. The showroom is located on the corner and it is sufficiently large to provide display space for all models of Ford passenger and commercial cars as well as the Fordson tractor. The accessory store is located next to the showroom but it is a separate unit. The parts and accessory stockroom is given frontage on the main street because it is desirable to handle the retail sale of parts at this point. This room should be provided with bins arranged so that the clerks can

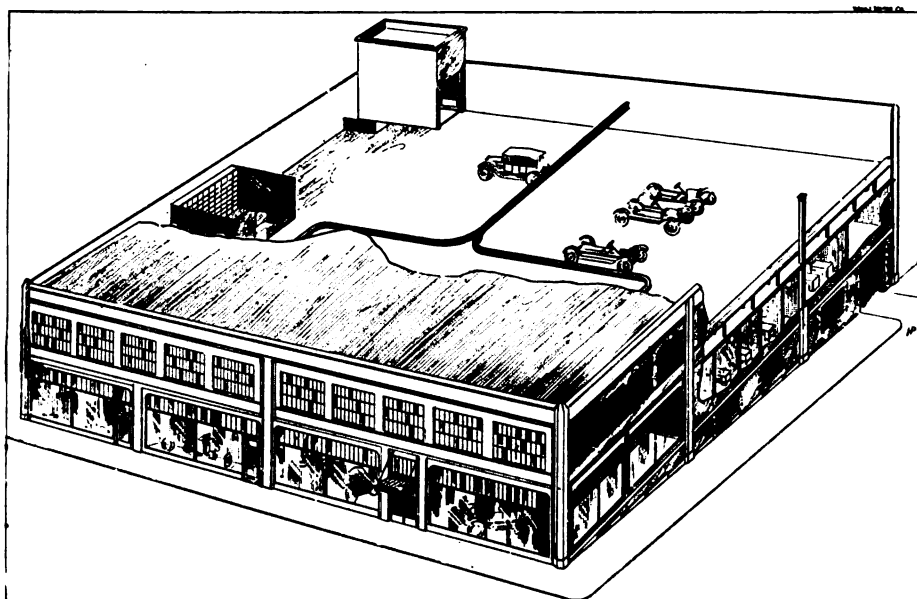


Due to the slope of the side street, the entrance to the basement is direct from the street

handle both retail sales and the requirements of the service department with despatch. The new car department will be used principally for storage and for preparing cars for delivery.

Jobs of a minor nature are handled in the basement. In addition this floor is used for the reception of service customers, the storage of cars awaiting their turn in the service station or awaiting delivery, and the delivery of finished jobs. It will be important to maintain this portion of the building scrupulously clean at all times as it is here that the customer makes contact with the service department. A small waiting room is provided for the comfort of the customer.

The entire second floor is taken up by the shop. It is very completely equipped and an effort has been made to arrange the units so that the work will progress with maximum speed. The equipment used in the repair of the power plant and transmission are arranged in a production line so that different parts of the same car may be worked on simultaneously. The mechanics should have all ordinary tools in their kits but special tools will be carried in the toolroom. A small auxil-



Cutaway view of the building, showing a portion of the service department

ary parts stock should also be carried here so that the needs of the shop may be supplied quickly. A dumbwaiter connects this with the main stockroom.

List of Parts for Single Operations (Continued from page 24)

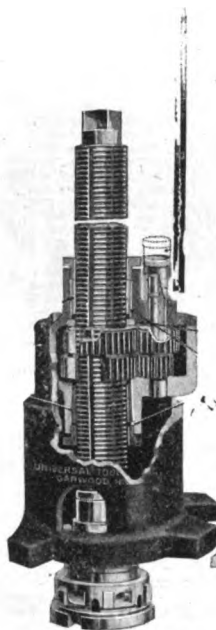
Operation No.	Quantity	Part No.	SERIES 19 FOUR Name of Parts	Operation No.	Quantity	Part No.	SERIES 19-20 LIGHT & SPECIAL SIX Name of Parts	Operation No.	Quantity	Part No.	SERIES 19-20 BIG SIX Name of Parts
Group H—Continued				Group H—Continued				Group H—Continued			
5	1	356	Water pump shaft packing.	5	1	356	Water pump shaft packing.	5	1	356	Water pump shaft packing.
6	1	16871	Water pump impeller.	6	1	16871	Water pump impeller.	6	1	16871	Water pump impeller.
1	1	356	Water pump shaft packing.	1	1	356	Water pump shaft packing.	1	1	356	Water pump shaft packing.
1	1	16869	Water pump body gasket.	1	1	16869	Water pump body gasket.	1	1	16869	Water pump body gasket.
1	1	16877	Water pump outlet hose.	1	1	16877	Water pump outlet hose.	1	1	16877	Water pump outlet hose.
7	1	1625	Fan Belt.	7	1	1625	Fan Belt.	7	1	1625	Fan Belt.
8	1	5548	Fan bearing front cone.	8	1	5548	Fan bearing front cone.	8	1	5548	Fan bearing front cone.
2	1	5549	Fan bearing cups.	2	1	5549	Fan bearing cups.	2	1	5549	Fan bearing cups.
1	1	5554	Fan bearing rear cone.	1	1	5554	Fan bearing rear cone.	1	1	5554	Fan bearing rear cone.
2	1	5551	Fan bearing cage with ball.	2	1	5551	Fan bearing cage with ball.	2	1	5551	Fan bearing cage with ball.
2	1	5550	Fan hub dust washer.	2	1	5550	Fan hub dust washer.	2	1	5550	Fan hub dust washer.
9	1	32720	Fan complete.	9	1	35471	Fan complete.	9	1	35471	Fan complete.
10	1	36235	Top radiator hose.	10	1	36235	Top radiator hose.	10	1	36235	Top radiator hose.
Group I				Group I				Group I			
1	1	35202	Dust pan front section.	1	1	35202	Dust pan front section.	1	1	35202	Dust pan front section.
1	1	35203	Dust pan fly wheel section.	1	1	35204	Dust pan fly wheel section.	1	1	35204	Dust pan fly wheel section.
1	1	35388	Dust pan radiator section.	1	1	35390	Dust pan radiator section.	1	1	35389	Dust pan radiator section.
2	1	15x86	Dust pan radiator section fr. screw.	2	1	15x86	Dust pan radiator section fr. screw.	2	1	15x86	Dust pan radiator section fr. screw.
10	1	27x47	Dust pan radiator section fr. screw nut.	10	1	27x47	Dust pan radiator section fr. screw nut.	10	1	27x47	Dust pan radiator section fr. screw nut.
2	1	40x101	Dust pan radiator section fr. screw washer.	2	1	40x101	Dust pan radiator section fr. screw washer.	2	1	40x101	Dust pan radiator section fr. screw washer.
2	1	35388	Dust pan radiator section.	2	1	35390	Dust pan radiator section.	2	1	35389	Dust pan radiator section.
2	1	40x101	Front screw washer.	2	1	40x101	Front screw washer.	2	1	40x101	Front screw washer.
2	1	15x86	Front screw.	2	1	15x86	Front screw.	2	1	15x86	Front screw.
4	1	27x47	Front screw nut.	4	1	27x47	Front screw nut.	4	1	27x47	Front screw nut.
Group J				Group J				Group J			
1	1	36314	Front fender, right.	1	1	32836	Front fender, right.	1	1	32834	Front fender, right.
1	1	36315	Front fender, left.	1	1	32837	Front fender, left.	1	1	32835	Front fender, left.
6	1	15x35	Fender to guard, bolt and nut.	6	1	15x35	Fender to guard, bolt and nut.	6	1	15x35	Fender to guard, bolt and nut.
3	1	15x86	Front fender to frame, bolt.	3	1	15x86	Front fender to frame, bolt.	3	1	15x86	Front fender to frame, bolt.
2	1	34977	Rear fender, right.	2	1	33239	Rear fender, right.	2	1	33557	Rear fender, right.
1	1	34978	Rear fender, left.	1	1	33240	Rear fender, left.	1	1	33558	Rear fender, left.
4	1	15x35	Rear fender to splasher screw.	4	1	15x35	Rear fender to splasher screw.	4	1	15x35	Rear fender to splasher screw.
3	1	32799	Splash guard, right.	3	1	32803	Splash guard, right.	3	1	32801	Splash guard, right.
1	1	32800	Splash guard, left.	1	1	32804	Splash guard, left.	1	1	32802	Splash guard, left.
6	1	35x133	Splash guard to running bd. screw.	6	1	35x133	Splash guard to running bd. screw.	6	1	35x133	Splash guard to running bd. screw.
4	1	15x35	Screws.	4	1	15x35	Screws.	4	1	15x35	Screws.
4	1	32429	Running board pad, left.	4	1	32432	Running board pad, left.	4	1	32430	Running board pad, left.
1	1	32428	Running board pad, right.	1	1	32433	Running board pad, right.	1	1	32431	Running board pad, right.
5	1	35267	Head lamp bracket.	5	1	35267	Head lamp bracket.	5	1	35267	Head lamp bracket.
4	1	19x266	Head lamp bracket bolt and nut.	4	1	19x266	Head lamp bracket bolt and nut.	4	1	19x266	Head lamp bracket bolt and nut.

(Continued in September 14th Issue)

Automotive Equipment

NEW UNIVERSAL CYLINDER REBORING TOOL

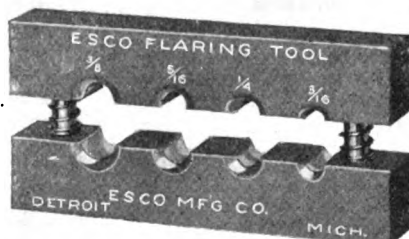
This tool may be operated either by hand, drill press or with a special power attachment for use with an electric or air drill. It is adapted for use on all types of engines. The tool is portable and weighs 40 lb. All wearing parts are adjustable. It is made in several sizes and the cutter head has a universal adjustment.—The Universal Tool Co., Inc., Garwood, N. J.



New Universal Cylinder Rebor-ing tool

ESCO DOUBLE FACE FLARING TOOL

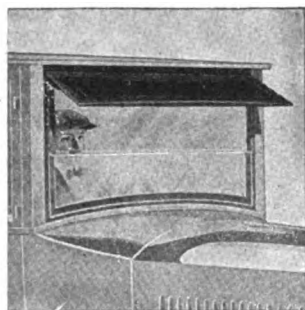
This is a double face, self-opening tool which is said to give the proper flare and taper to either copper or brass tubing in four sizes with one blow of the hammer. The sizes are $\frac{1}{8}$, $\frac{1}{4}$, $\frac{3}{8}$ and $\frac{1}{2}$ in. outside diameter. Instructions as to how to anneal tubing are enclosed with the tool. Price \$3.25.—Esco Mfg. Co., Inc., 228 Farnsworth Street, Detroit, Mich.



Esco Double Face Flaring Tool

TROY SUNSHADE

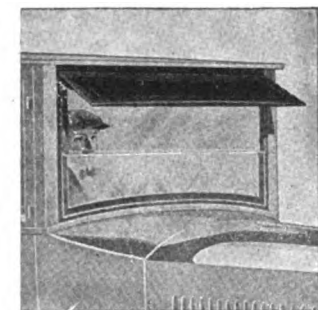
The adjustable brackets provided with this shade make it possible to fit it on any car without carrying a large stock. Three standard widths are manufactured, 42 in., 44 in. and 46 in. Brackets are provided for both open and enclosed cars. The sunshade is covered with Rayntite. A flap at the top keeps water from dripping down on the windshield and a gutter at the lower edge carries the water off to the sides.—Troy Sunshade Co., Troy, Ohio.



Troy Sunshade

CRITZ SUPER PRESSURE LUBRICATING SYSTEM

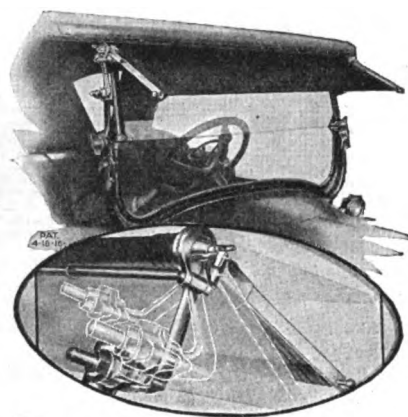
This system is made in two sizes, one for cars and one for trucks. The complete outfit consists of a gun and several small fittings which replace oil and grease cups on the chassis. These small fittings contain a ball check valve for retaining the lubricant. By means of a special fitting this lubricator can be used on cars equipped for the Alemite system. The lubricator is designed so that it can be operated with one hand.—Lathan Auto Supply Company, San Francisco, Cal.



Critz Super Pressure Lubricating System

DENNISON TAGS

The overhauling and repairing tag is printed on two sides and is so designed to cover a complete overhaul job. Size is $9\frac{1}{2}$

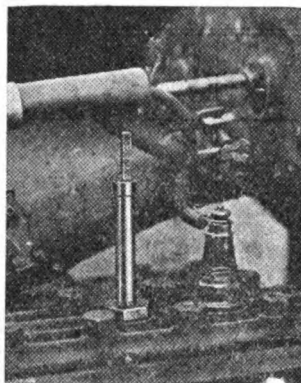


Acme Windshield Visor

by $4\frac{1}{2}$ in. Other tags are designed for the storage battery service station, the tire dealer and for the storage garage.—Dennison Mfg. Co., Framingham, Mass.

ACME WINDSHIELD VISOR

The Acme visor is so designed that the 42-in. model can be adjusted to fit 90 per cent of touring cars. The holding arms or brackets that fasten the visor to the frame of the windshield work on the simple hinge principle and can be moved back and forth according to the size of the windshield. The visor itself operates on a ratchet and can be lowered or raised as desired. The visor is fastened entirely to the windshield and does not interfere with the operation of the top. When not in use the visor can be rolled back out of sight against the top of the windshield. The arms that hold the visor in place, when extended, can be folded flat against the drawn visor. The fittings are made of brass, nickel plated and polished. The outside of the visor is black and the inside is green. Price, \$12 to \$25, according to width of visor.—Acme Motor Shield Corp., 1819 Broadway, New York City.



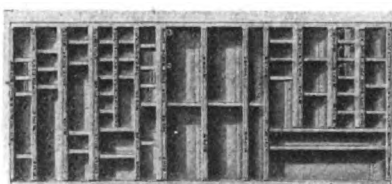
Bowers Combination Tester

BOWERS COMBINATION TESTER

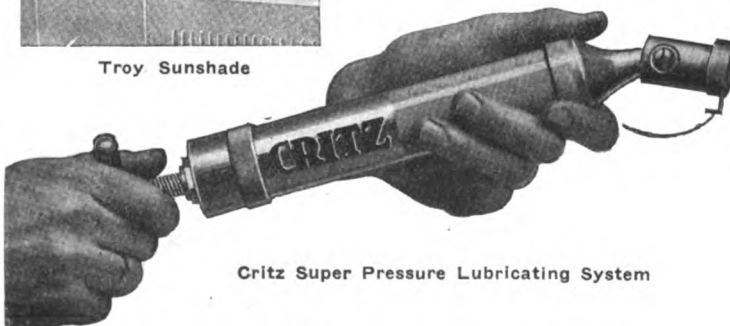
This instrument has a variety of uses. It will measure in pounds, the pulling power of permanent magnets; will test compression in any engine; will test valve spring tension and will weigh small articles. A $4\frac{1}{2}$ -in. rule is included in the outfit. Price \$3.00.—Rock Sales Co., Minneapolis, Minn.

LYON AUTO PARTS CONTROL

This is a system of steel bins designed for the stock room of the Ford dealer. Units are also made to take care of the Fordson requirements, and there are also several sections to take care of parts of such unusual size as radiators, running boards and dust shields, wheels and rims, springs, front and rear fenders and radius rods. The sizes of the bins and compartments may be adjusted. The shelves can be moved on $1\frac{1}{2}$ in. centers vertically and the dividers on 1 in. centers horizontally. The units are made for various sizes of stock from \$5,000 up.—Lyon Metallic Mfg. Co., Aurora, Ill.

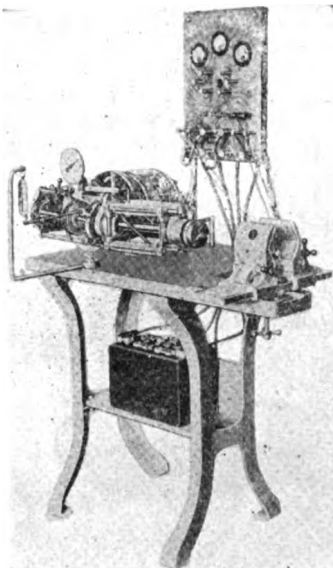


Lyon Auto Parts Control

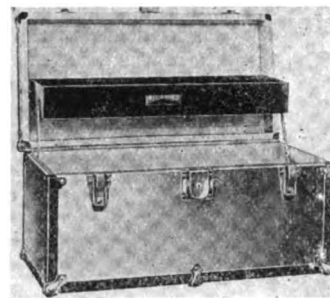


UNIVERSAL TEST BENCH

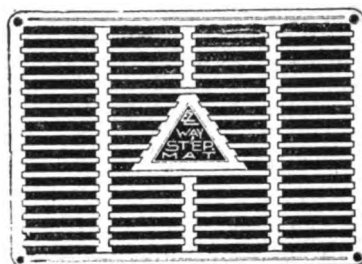
The motor on this bench is rated at 1 hp. A single unit friction head, mounted in one piece casting, direct to motor frame, gives a speed variation up to 3600 in either direction. The speed indicating dial is built in. The driving feature of this machine is unique. A four bar parallel bracket arrangement is used, which holds the driving head and chuck in a parallel position in relation to the holding vise at all positions through a vertical radius of 6 inches and a horizontal radius of 12 inches. This allows the machine being tested to be instantly clamped into the vise, and since the vise is free to move forward and back from chuck, it can be moved forward to chuck, and without any raising or lowering of the machine. Chuck can be moved into the plane of the shaft and be clamped to same instantly, regardless of the height or position of shaft in relation to the holding vise. The driving shaft is fitted with two universal couplings. The switchboard is equipped with a 30-0-30 ammeter, 600-0-600 ammeter, and a 0-30 voltmeter. Price complete, without battery, \$490.—Quality Electrical Products Co., 915 East Fifteenth Street, Kansas City, Mo.



Universal Test Bench



Union Tool Chest



EZ-Way Step-Mat

UNION TOOL CHEST

These chests are made with the tray that automatically raises with the top and always remains level and out of the way. They are furnished with-out trays if desired to accommodate large tools, such as blow torches, and for mechanics who prefer to make special trays to exactly fit their needs. They are made of a fine grade of lumber and covered with zinc. All corners, catches, clamps and locks are brass plated, and the lock is a Corbin twelve change type. The style illustrated measures 7½ x 8 in. inside and is made in seven lengths, from 13 in. to 32 in. A similar style is also made in a smaller chest. —Union Tool Chest Co., 76 New Street, Rochester, N. Y.

EZ-WAY STEP-MAT

The mat is made entirely of cast aluminum. Horizontal bars on an aluminum frame, reinforced by wide vertical bars, form a grate. Consequently, any dirt scraped off on it falls on the running board underneath the mat. The mat is arranged so that the accumulation of dirt may be easily washed out. Price \$2 each.—Geo. E. La Vietes Co., New Haven, Conn.

VALLEY BUFFERS AND GRINDERS

Both motor and stand are finished in black enamel paint with letters in aluminum. End plates are solid and bearings are SKF ball, double row self-cleaning type. Each machine has a double shaft extension threaded on both ends. On one end there are two 4-in. flanges and nuts for holding the wheel, and on the other end a nut for holding the brush. These machines are made in various sizes, from ½ hp. up to 4 hp. The machines are equipped with single phase motors and come complete with starting switch. —Valley Electric Company, 3157 So. Kingshighway, St. Louis.

CHIEF OIL GAUGE FOR FORDS

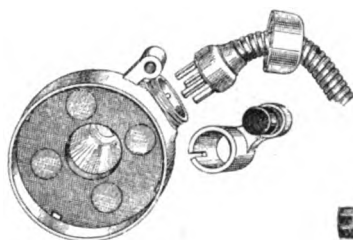
The purpose of this device is to make it possible for the Ford owner to test the oil level in his crankcase without getting under the car. A special elbow replaces the lower pet-cock. A long tube fits into this elbow and in this tube is contained a measuring rod which is marked in four sections as follows, Danger, Low, O. K., Excess. The tube projects about ½ in. through the splash pan above the front end of the running board. The pet-cock, which is removed, is placed in a connection in the elbow.—Chief Products Co., 2335 South Michigan Avenue, Chicago, Ill.

MOTOR CITY TEST STAND FOR FORDS

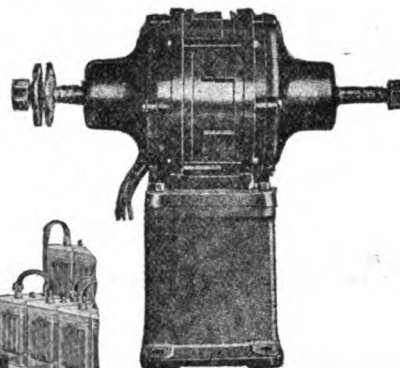
This outfit is mounted on a cast base. It is specially designed to speed up and simplify the test of the starting and lighting equipment on the Ford car. Price \$128.—Fleming & Miller, Inc., Detroit, Mich.

ALPHA TIMER

The contacts in this timer are moulded in a bakelite disk which is removable from the shell. The cables leading to the spark plug are carried in a flexible tube which terminates in a special form of plug connection. The timer arm is equipped with a carbon brush. Price \$5.—Alpha Timer & Accessories Company, 232 St. Paul St., Baltimore, Md.



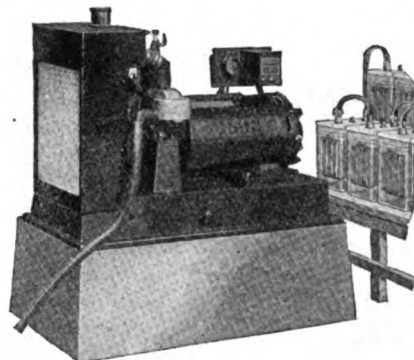
Alpha Timer



Valley Buffers and Grinders

MAIN POWER LIGHT PLANT

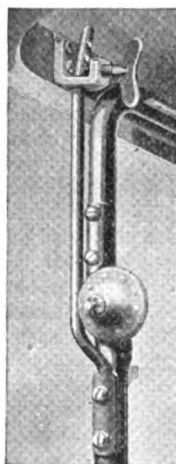
This plant is made in two sizes, 1 kw. and 1½ kw. The smaller outfit has a 2 hp. single cylinder engine with 2½ in. bore and 2½ in. stroke. The battery consists of 16 cells and has a rating of 60 ampere hours. The engine on a larger unit is rated at 2½ hp. and the battery at 90 ampere hours. Both engines are of the two-cycle type and water cooled, and are directly connected with the generator. Prices are \$295 and \$450, respectively.—Main Electric Co., Cleveland, Ohio.



Main Power Light Plant

PONTIAC WINDSHIELD TOP SUPPORT FOR FORDS

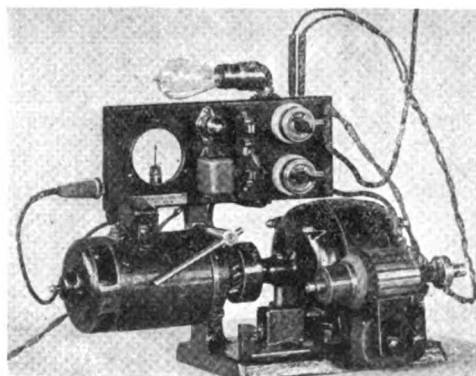
This is a device for securing the front of the Ford top to the windshield, replacing the usual straps. It consists of two uprights, which are attached to the side of the windshield and a clamp which is attached to the inside of the front bow. This clamp fits over the uprights, and in this way holds the front of the top stationary. Price \$2.50.—American Forging & Socket Co., Pontiac, Mich.



Pontiac Windshield top support for Fords



Chief Oil Gauge for Fords



Motor City Test Stand for Fords

Speeding Up Ford Electrical Service with Special Tools

Fourteen Tools Sufficient for All Operations on Ford Starter and Generator

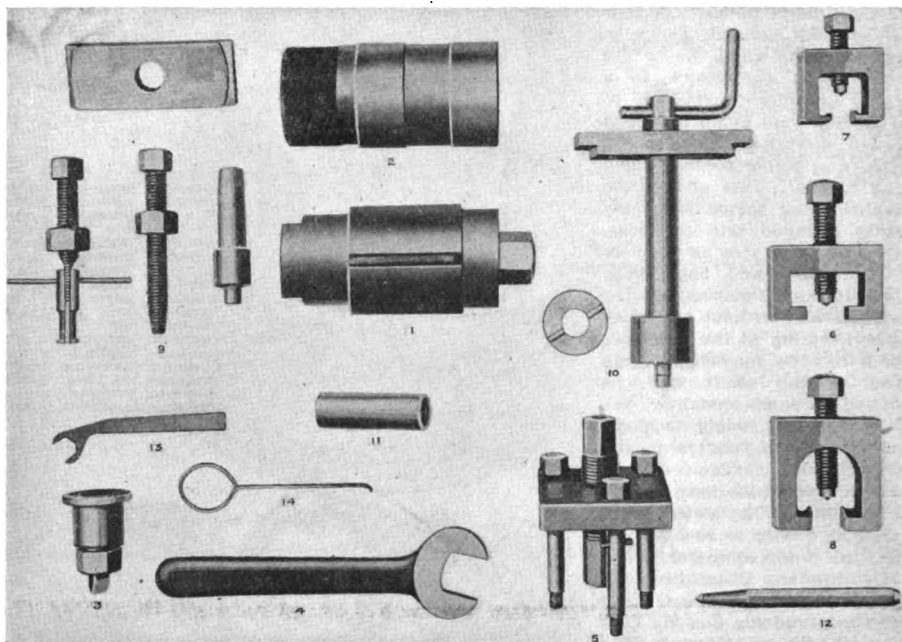
A NEW line of tools for speeding up service on Ford starting and lighting equipment is being manufactured by the F. B. Electric & Mfg. Co., Detroit. There are fourteen tools in the complete set and they may be purchased singly or as a set. The price of the complete set is \$96.95.

When the Ford generator or motor leaves the factory, the poles have been forced very tightly against the field while the single screw holding each pole has been tightened up with a special screwdriver, much more tightly than could be done with an ordinary tool. The pole piece spreader is an expanding arbor which is designed to force the poles as tightly into position as when they are assembled at the factory. A special screwdriver, which is used in connection with a vise and wrench, is used to draw the holding screws up tightly. A go and no-go gage is provided to test the correctness of the setting of the pole pieces. If the poles are in proper position, the smaller portion of the gage will pass between the poles and the larger portion will not.

The armature ejector, which operates

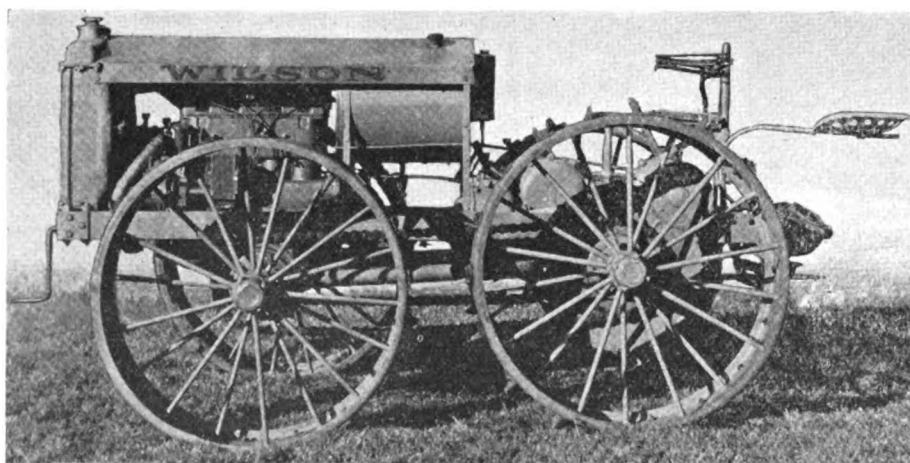
on the same principle as a wheel puller, is used to pull the drive end cover off the armature shaft. The ball bearing which fits in this end cover is pressed on the armature shaft and is often a very tight fit in the cover as well. The first step in disassembling the generator for re-

pairs is to remove the drive pinion from the shaft, and a special pinion puller for this job is included in the set. The generator armature bearings are a press fit on the shaft and are removed with a special bearing puller. The combination bonnet fixture is used to pull the ball



1—Pole piece spreader. 2—Go and no-go gage. 3—Pole piece screwdriver. 4—Wrench for operating pole piece screwdriver. 5—Armature ejector. 6—Pinion puller. 7—Small bearing puller. 8—Large bearing puller. 9—Combination bonnet fixture. 10—Brush sander. 11—Bearing driver. 12—Pole screw punch. 13—Third brush wrench. 14—Brush lifter hook

Wilson Four-Wheel Drive Tractor



A UNIQUE method of driving all four wheels is used in the Wilson tractor. The wheels are mounted on fixed axles, and those on each side are connected by chains which pass over sprockets mounted on the hubs. The rear sprocket on each side is driven. When it is necessary to make a turn, the wheels on one side are stopped or slowed down, which makes the method of steering very similar to that used on tracklayers.

The engine is a 4-cylinder Weidely with 4-in. bore and 5½-in. stroke. It

is fitted with Kingston carbureter and high-tension magneto. The transmission is of a special planetary design, and provides the following speeds: High—3.6 m.p.h.; low—1½ m.p.h.; reverse—1 m.p.h. The wheels are 40 in. in diameter, and have a 12-in. face. The turning radius is 14 ft. The belt pulley is 8 in. in diameter with 5 in. face, and runs at 1265 r.p.m. The tractor is equipped for line drive.

The manufacturer is the Wilson Tractor Mfg. Co., Ottumwa, Iowa.

bearing out of the generator end bonnet, to pull the bushing out of the motor end bonnet and to drive a new bushing in the motor end bonnet.

The brush sander is one of the most interesting tools in the set. It consists of a shaft and handle with a guide plate to center the shaft in the field frame. The other end of the shaft has a two-diameter, hardened bearing that centers this end of the shaft in the commutator end bearing. Two steel sander drums are furnished, which are of the same diameter as the commutator. These are covered with No. 1 sandcloth, in the following manner: Cut the sandcloth and fit to the drum with a diagonal joint. Leave a little gap in the joint because when the cloth is wet with glue or shellac, which is used to attach it to the drum, it will expand and it must not lap over. In operating the tool, the commutator end bonnet is left on the frame. The brushes are raised and the sander inserted. The brushes are dropped down on the sanding drum and then the tool is turned by means of the crank until a seat is obtained.

The bearing driver is used to force the ball bearing on the generator shaft. The pole screw punch is used for locking the pole screws in the frame after they have been tightened up with the special screw driver. A special wrench is provided for making the adjustment of the third brush. The small hook illustrated is used for lifting the brushes on either the generator or the motor.

You Can

Help Your Catalog Get Business

This Story Tells How One Sales Manager Made His Catalog Popular by Featuring the Index



By W. K. SMITH

Vreeland Advertising Press, New York

A SALESMAN for the Blank Sales Co., jobber of automotive equipment, was calling on an important accessory dealer whose business was much sought by a number of jobbers. The dealer inquired about a well known brand of automobile bumpers handled by the Blank company, and in order to point out just what he wanted, he called to his bookkeeper.

"Fred, get me that Jones-Smith catalog," and he pointed to a shelf where the Jones-Smith book (Jones-Smith being a rival jobber of Blank) stood alongside the Blank catalog.

"Mr. Dealer," remonstrated the salesman, "those bumpers are in our catalog absolutely complete."

"I know it," replied the dealer, "but I wouldn't be able to find them. I can never find anything in that book of yours when I'm in a hurry."

"How about the index," the salesman asked.

"Index, index, I can't even find that in your book. You've got three of them and I always get the wrong one and if I do find the index I want, I've got to get my glasses to read it."

The salesman pondered and when he went back to the office Saturday, he had something to tell the sales manager.

"What's the idea of our catalog?" he asked by way of a preliminary gun.

"Why, to get business that you birds miss," came the reply.

"The principal idea of our catalog," continued the salesman, ignoring this sally, "is to get looked at, isn't it? You won't get any business at all from it unless your dealer looks in

it, and this is just what a lot of them aren't doing.

"It seems to me," he went on, "that in the face of the competition we have in catalogs (every dealer has about ten of them you know), we ought to make ours the one he is going to look at whether he buys from us or some one else. They're all about the same in price but not in handiness."

"We've got the best catalog out," retorted his superior, "450 pages, board covers, plate paper, high class printing. What's the matter with it?"

"The index. You've spent a lot of money and effort on everything else in it but the index and that looks like an after-thought. It's hard to find it in the first place, and hard to read it in the second. A lot of my customers use the Jones-Smith book because they can find items easier in it."

The sales manager took thought and then went over all the other jobber catalogs he could find. In almost every instance the index had been given little thought. Sometimes it was in front, sometimes in the back, and sometimes split up in several places covering various lines. The type was usually the smallest in the book and it was apparent that the effort was almost universally made to get the index in the smallest space possible. His own book was not an exception in any way, although the Jones-Smith book was better.

He had learned a lesson with the result that a conference with the advertising manager led to a new idea in indices in the next issue of the

catalog. The type was changed from six to ten point and in the hands of a capable printer the arrangement was greatly improved. The edges of the index pages were indented and finger tabs made bearing the letters of the alphabet. All the items previously distributed over three indices were brought together in one and well cross-indexed. In order that it could be got at in the handiest way, a radical change was made in putting it in the middle of the book. The page numbers were changed from the middle of the bottom of the page to the upper corner and made heavier.

The items were rearranged into related groups instead of being scattered through the book under no definite plan. For instance, spark plugs, cables and cords, plugs and connectors, switches, magnetos, batteries, ignition parts, etc., followed one another logically and a "contents" page showing the various groups was inserted as a quick reference.

The pages immediately preceding and following the index were given to the display of special items that the company wanted to move and on the cover artistically inscribed was the sentence, "You Can Find It in Here."

The extra pages taken up by the expansion of the index were compensated for by the elimination of several pages of introductory matter that was of little interest to the trade and probably never read.

"What do you think of our new catalog?" the sales manager asked his salesman, six months later.

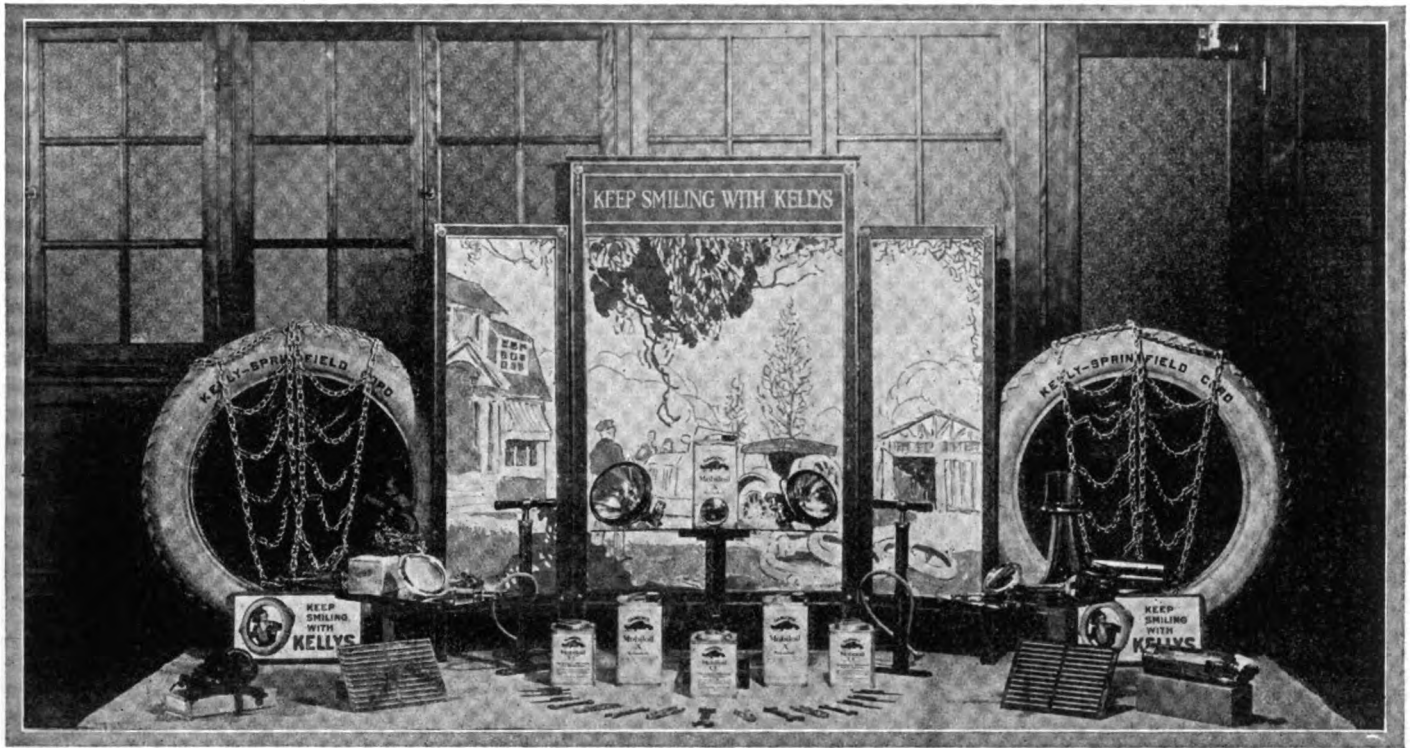
"They're all using it now," was the answer.

SOME GOOD DISPLAY IDEAS THAT



Top—A unique battery window by Eldridge-Buick Co., Seattle, that stimulated battery sales. Below—George H. Brush, Newark tire and accessory dealer, displays prominently his business policy for the benefit of customers and employees as well

ARE SELLING AUTOMOTIVE PRODUCTS



Top—A striking accessory window display arranged for the inspiration and assistance of its dealers by Kelly-Springfield. Below—A car sold to a local firm shown in a window, gaining the good will of the customer and the confidence of other prospects. This display was made by W. O. Eaton, Seattle Dodge distributor

Optimism Feature of Federal Survey

BOARD FINDS TRADE GAINING STEADILY

Reductions and Good Crops Have Salutory Effect on Industry's Recovery

WASHINGTON, Sept. 2—Analysis of reports received from agents of the Federal Reserve Board on business conditions throughout the country shows that the automobile trade is feeling its way out of the economic depression. The price reductions have stimulated sales and the early marketing of crops puts the farmer on the prospect list because of his improved financial status. The movement of crops away from farms is expected to have a salutory effect in the liquidation of outstanding indebtedness and provide a favorable credit situation.

The board has found evidence of improvement in some branches of foreign trade and with a fairly good agricultural yield and enlargement of manufacturing demand, it is believed the autumn season will be encouraging to trade. The Federal agents state, however, that the situation is not such as to forecast any extensive or immediate revival of business in a large sense.

Because of the fact that manufacturers and dealers alike are interested in the question of price stabilization, it is significant to note the opinion of the Federal Reserve Board: "Price movements have been on the whole limited, but with a slight upward tendency in the case of some groups. The Federal Reserve Board index prepared for international comparisons shows an increase of two points to 141. The index number of the Bureau of Labor Statistics for July was 148, the same as during June. The current price reports for the early part of August indicate if anything, a strengthening of prices in some lines.

"On the whole it is impossible to forecast the general trend of prices during the month. Manufactured goods have probably held relatively firm, but as has been indicated above, many important raw materials have declined. Prices in general during the past three or four months have become somewhat more stabilized than they were in the early spring, but whether this period of relative stability will continue, whether prices will rise appreciably, or fall is a matter for speculation. A continuation of relative stability in the price level as a whole might be marked by more or less extreme variations in the prices of individual commodities if the variations cancelled one another. For instance, increases which might occur in the prices of commodities which have been 'liquidated' or reduced to approximately pre-war levels.

SPOKANE A "FRIENDLY CITY," SAY STICKERS PUT ON TOURIST CARS

SPOKANE, WASH., Sept. 5—Tourist cars traveling into Spokane will soon be decorated with "Spokane Is a Friendly City" windshield stickers, according to Frank W. Guilbert, member of the Chamber of Commerce Publicity Committee. The stickers will be red and white in color and will be about 4 x 7 inches.

The slogan was adopted as a result of Spokane being proclaimed a friendly city by William Allen White in an article that appeared in the Saturday Evening Post recently.

WILLS-SAINT CLAIRE ARRIVES IN PORTLAND

PORTLAND, ORE., Sept. 5—The Wills-Saint Claire is the latest arrival on the automobile row at Portland. The first shipment of these cars, consisting of two touring models and a roadster, was received by the Charles C. Fagan Co. last Wednesday. Fagan, who heads the Fagan company, which is the Pierce-Arrow distributor for Oregon and southern Washington, recently made a trip east to secure the Wills-Saint Claire franchise, if possible, and returned several days ago, just before the arrival of the cars, in fact, with the contract in his pocket. Fagan has been given the distribution for Oregon and southern Washington as far north and including Centralia. He will start at once locating dealers in the various towns, he stated. Taking the Wills-Saint Claire will not interfere with the Pierce-Arrow, he declared, which the company will continue to handle as in the past.

LE MARNE TO BE BUILT AT TRENTON, CANADA

TORONTO, Ont. Sept. 5—The board of directors of the Anglo American Motors, Ltd., have finally closed with the town of Trenton for the site for their plant, where they will build the "Le Marne" car. This means a big boost for industry in Trenton, as the factory will be a large one, employing several hundred men.

The company will manufacture two types of automobiles, a four and an eight cylinder model, both with closed bodies. The car will be Canadian built throughout, and the manufacturers claim that the price will be less than any car of the same size and quality now being made in Canada. They propose to sell the small four cylinder car for \$975, and the eight for \$3,000.

FALSE RUMORS HURT TRADE IN BAY STATE

Spreading of Fake Stories Stirs Dealers—Fail to Run Them Down

BOSTON, Sept. 2—Some Boston dealers, and the manufacturers they represent in particular, and the motor trade in general, have lost several thousand dollars in the last few weeks as a result of false rumors being gossiped about regarding different companies and some of their models. For about two weeks there has been a story going around Boston that there were some 50 models coming over the road from New York to be sold at a sacrifice, the only difference between them and the present models being that they were right-hand drive.

"Cars for Export"

The story had them as cars built for export, or cars that had been overseas and were shipped back. The rumor broke just when Marmon dealers were having their second annual demonstration week, and the result was prospective buyers holding off to get a look at the supposed bargains. Every method possible was taken to try to run the story down, for it spread to other places outside Boston and did a lot of harm.

Dodge Brothers came in for the old rumor of army cars, and at Camp Devens the officer in charge received something like 1000 letters asking for information about the sacrifice sale going on. Even a newspaper in New Hampshire, it is said, swallowed the story. One man drove up from Boston to get hold of a bargain.

Ford Story Current

Then there came the story about Henry Ford's new car. That slowed up business among the dealers here as a result of the story getting prominence in one of the newspapers. One of the Ford dealers stated that it represented a loss of \$5,000 to him, and in less than an hour after he opened the day the story broke he got 20 telephone calls about it. Some of the dealers are trying to figure out some way to check such rumors in the future, for they have had a dose of them in the past during the war when the talk was heard of rationing gasoline, and the stopping of all cars except those used for business, which cost a lot of sales just after a motor show when business was picking up. To get another dose of rumors now when business is not very good does not make them very cheerful, and if any of the rumors can be traced to their source legal action will be taken as there is law enough to cover such offenses.

A. E. A. Field Work Opens in Canada

SHERMAN ADDRESSES TWO LARGE MEETINGS

Merchandising Campaign Outlined at Sessions at Montreal and Toronto

CHICAGO, Sept. 2.—The first field work in the merchandising plan of the Automotive Equipment Association was made last week when meetings of the jobbing trade were held in Montreal and Toronto. At these sessions the work of the campaign was outlined and the assistance of the jobbing salesmen was requested in carrying on the work.

The meetings were addressed by Ray W. Sherman, merchandising director of the A. E. A., Nelson H. Oliver of Chicago, one of the merchandising committee, and A. J. Hayes of Windsor, chairman of the Canadian Automotive Equipment Association.

See Good Results

The reception accorded to the A. E. A. story is considered indicative of satisfactory results in the work. About 80 men attended each session.

The Montreal meeting was held in the Windsor Hotel, with J. Ernest Millen as chairman. George M. MacWilliam presided over the Toronto meeting, which was held in the King Edward Hotel.

At the start of the meetings the growth of the automotive equipment industry was outlined and the beginning of the A. E. A. described. Its early work was covered and then was outlined the present merchandising campaign and the plan under which it was proposed to progress.

An effort is to be made to increase the movement of merchandise among manufacturers, jobbers and dealers, which is to be done by working out business plans and recommending them to the various divisions of the industry where they will apply best.

Sherman Tells Story

A number of dealers were present at the Toronto meeting and of them it was requested that a favorable hearing be given to the jobbing salesman when the latter desired to suggest plans to increasing dealer profits through greater sales.

Sherman then told the story of one jobber's salesman in Chicago, William L. Reineke, who had helped several dealers make considerable amounts of money by sales assistance. Reineke, whose work has already been paralleled by a number of others, visited a dealer whom he knew and suggested that the two—dealer and jobber's salesman—make an effort to get added automotive equipment business.

Reineke started off in one instance by

COAST OFFICIALS OPEN WAR ON RED LIGHTS ON FRONT OF CARS

SAN FRANCISCO, CAL., Sept. 5.—The California State Motor Vehicle Department is organizing a general movement against the practice, now become quite common in some parts of the State, for motorists to use small red lights on the front of their cars. The danger in the use of these lights, and also in the use of small green lights on the front of the cars, lies in the ease with which an approaching car, bearing such lights, can be mistaken by the driver of another car for an auto going away from him, especially in stormy weather or very dark nights on mountain roads. Charles J. Chenu, superintendent of the State department, has asked all automobile dealers to warn buyers against the use of these lights.

manning the gasoline pump. The first man who drew up drove a Chandler. Reineke served the gasoline and then walked around the car. He put his hand on the radiator.

"Hot?" asked the car owner.

"Rather," Reineke replied. "But why don't you use a motometer?"

"Had two and somebody stole the d—things!"

"What you need is one with a lock. Just a minute."

How It Is Done

Reineke went in the garage, returned with the device, put it on the car, locked it and handed the keys to the car owner. The latter inquired the price and bought the article.

The next man drove an Overland and complained that the streets were dark. Reineke sold him a spotlight. The next man took a bumper that the dealer had had in stock for a year and a half. And so on. Spare fan belts and coils were sold in large numbers.

Cite Many Instances

Many similar instances were cited. One salesman sold an extra spark plug to nearly every car that drove up on a Saturday by saying, "You know, tomorrow is Sunday. A spare plug may come handy."

As a general rule, these sales demonstrations at the curb helped the dealers move considerable quantities of merchandise and in many instances store rearrangements were worked out and plans laid for continuing the profit-making work with the continued cooperation of the jobbing salesmen. Some stocks were soon cleaned out.

FORD MAKES SECOND CUT IN THREE MONTHS

Touring Reduced from \$415 to \$355—Roadster Is Now \$325

DETROIT, Sept. 2.—The third reduction in Ford prices in the past 12 months now places the Ford at the lowest price in its history, being under the prices for which it sold before the war. Reductions are made on all models of the passenger car, on the chassis and on the truck, but the price of the tractor remains unchanged. The reductions range from \$45 to \$100, as follows:

	Old Price	New Price
Chassis	\$345	\$295
Touring car*	415	355
Roadster*	370	325
Coupe	695	595
Sedan	760	660
1-ton truck	495	445

*Price without starter and demountable rims.

In making the announcement, the company states:

"We are taking advantage of every known economy in the manufacture of our products in order that we may give them to the public at the lowest possible price and by doing that we feel that we are doing one big thing that will help this country into more prosperous times. People are interested in prices and are buying when prices are right."

The production of Ford cars and trucks for August again broke all previous high records with the total reaching 117,696. June, 1921, with 117,247, was the previous record month.

\$54,844,538 IN BANK FORD STATEMENT SHOWS

LANSING, MICH., Sept. 2.—The Ford Motor Co., according to a statement filed with the Department of State, had \$54,844,538 cash on hand and in the bank at the close of business on June 30. Its plant, including land, buildings and improvements, were valued at \$46,926,010, machinery and equipment at \$21,182,990 and good will at \$20,517,985. Its total assets were listed at \$263,363,179. Its property in Michigan was valued at \$133,025,079. Total capital and surplus were given as \$173,951,172 and the amount of capital and surplus \$87,861,284.

Franklin Cuts Prices

SYRACUSE, N. Y., Sept. 1.—The H. H. Franklin Mfg. Co. announce the following price cuts to-day:

	Old Price	New Price
Sedan	\$3,650	\$3,350
Touring	2,650	2,350
Brougham	3,550	3,250
Roadster	2,550	2,300

INDIANAPOLIS PLANS TWO SHOWS THIS FALL

*One to Be Held by Trade; the
Other at Industrial
Exhibition*

INDIANAPOLIS, Sept. 5—Indianapolis is to be treated to two automobile shows this fall. The first, plans for which have been under way for weeks, will be that staged by the Indianapolis Automobile Trade Association the week of Sept. 5. The second will be held in conjunction with the Industrial Exposition which is to be held the week of Oct. 10. The two shows are similar in that automobiles and accessories will be shown, but they differ in that the latter exposition will be open only to Indianapolis made products. Requisitions for space already have been received from the automobile manufacturers here and from the tire and accessory manufacturers.

The automobile manufacturers will show in a group, space having been taken out sufficiently large to permit them all to make displays. The same thing is true of the tire and accessory manufacturers. Walter C. Marmon, head of the Nordyke-Marmon Co., and Harry C. Stutz, of the H. C. S. Motor Car Co., both are on special committees making preparations for the event. The exposition is being staged under the auspices of the manufacturers' committee of the Indianapolis Chamber of Commerce and the automotive industry is well represented on this committee. On this committee are George M. Dickson, of the National Motor Car Co.; D. McCall White, of the Lafayette Motors Co.; Paul P. Parker, of the Parker Tire & Rubber Co.; Harry C. Stutz, of the H. C. S. Motor Car Co.; L. M. Rankin, of the Duesenberg Motors Co.; Warren D. Oakes, of the Oakes Co.; John C. N. Orman, manager of the Indianapolis Auto Trade Assn., and J. A. Daugherty, of the Robbins Body Corp.

Daugherty, Parker and Orman are on the executive committee that is planning the show. The exposition will be simultaneous with the holding in Indianapolis of the annual convention of the National Purchasing Agents Assn.

Tires Holding Steady

PHILADELPHIA, Sept. 5—Automobile tires are holding steady in fair demand, but there is nothing like a rush to buy, notwithstanding the cheaper price than a year ago this season. The trade does not look for any further reduction in price for some time. A feature of the situation appears to be the "hand-to-mouth" buying on the part of car owners. Dealers report that there is a tendency to take a chance on a second grade, or imperfect tire at a very cheap price, instead of investing in a substantial standard article.

WAYSIDE TELEPHONES PLAN FOR HIGHWAYS IN PENNSYLVANIA

POTTSVILLE, PA., Sept. 5—A wayside system of telephones, whereby motorists en route can call up their homes on all State roads, and also call for help if a breakdown occurs are being installed in Schuylkill County.

This system has great possibilities for development, as it provides for wayside tools in boxes for emergency purposes.

ROYAL REX TRUCK HAS NEW SHIPMENT PLAN

CHICAGO, Sept. 5—The Royal Rex Motors Co., Chicago, building motor trucks and motor buses, is featuring a new departure in truck shipments between the factory and dealers. The outstanding feature is the shipment of trucks in boxes and cases instead of total units. By the use of this method the transportation charges are very materially reduced, and the shipments are arranged and packed in such a way that the truck can be assembled at the point of destination with a minimum amount of time and labor.

The truck is assembled from standard units but aside from the shipping feature there are several other up-to-date features. The chassis are in 1, 1½, 2, 2½, 3½ and 5-ton capacity. The intake air purifier for the purpose of eliminating dust is one of the engineering points. The frame is assembled without rivets, has no holes in the top web of the side rails and has a sub-frame of wood. The engine is supported in a steel cradle which in turn has a three-point suspension.

COMMITTEES NAMED FOR M. A. M. A. CONVENTION

NEW YORK, Sept. 5—Committees for the "Back to Normal" Credit Convention of the Motor and Accessory Manufacturers Association have been announced by General Manager M. L. Heminway. The Detroit Committee of Arrangements will consist of: C. W. Dickerson (chairman), vice-president, the Timken Detroit Axle Co.; E. R. Ailes, treasurer, Detroit Steel Products Co.; M. A. Moynihan, secretary, Gemmer Mfg. Co.; William Hendrie, secretary, Detroit Gear & Machine Co.; Thomas M. Simpson, credit manager, Continental Motors Corp.

The Honorary Committee, consisting of the association's board of directors in Detroit, has also been appointed. These will comprise: A. W. Copeland (chairman), president, Detroit Gear & Machine Co.; C. H. L. Flintermann, vice-president, Detroit Pressed Steel Co.; E. P. Hammond, president, Gemmer Mfg. Co.; F. Glover, vice-president, Timken-Detroit Axle Co.; G. W. Yeoman, vice-president, Continental Motors Corp.

LOUISVILLE DEALERS WILL HEAR SHERMAN

*Accessory Men Plan to Put
Business on Same Basis As
Other Lines*

LOUISVILLE, KY., Sept. 5.—Jobbers and dealers in automobile accessories in Louisville expect to put their business on the same basis as other lines of merchandising by eliminating sales on the part of jobbers to the public at wholesale cost. This matter is now in process of adjustment. Several meetings of joint committees from jobbers and dealers have been held at the invitation of the Louisville Automobile Dealers Association.

Frank T. Sullivan is chairman of the Dealers Committee and T. M. Williams is chairman of the Jobbers Committee. A report of the findings of the joint committee will be made at the next meeting of the automobile dealers, which will be held Thursday evening, August 25, at Fountaine Ferry Park.

Arrangements have been made, it was announced at the Association office, to have Ray W. Sherman, merchandising director of the Automotive Equipment Association, Chicago, to be the principal speaker at the September meeting.

There are two talks scheduled for the regular program at the association meeting Thursday. C. S. Potter will outline a project for the Enclosed Car Week for the dealers early in October. John R. Boyd will discuss the subject of "Taxation." There will be a burlesque on a used car sale.

RAYBESTOS INCREASES ITS CAPITAL \$5,000,000

BRIDGEPORT, Sept. 5—At a recent meeting of the stockholders of the Raybestos Co. of this city, manufacturers of automobile brake linings, Ford accessories and automotive supplies, the capital stock was increased from \$3,000,000 to \$8,000,000 it was disclosed by papers filed in the town clerk's office here yesterday. There is an increase of common stock shares from 15,000 to 30,000; of preferred stock shares from 15,000 to 50,000. None of the stock is on the market, it is announced.

The increase of capital stock was to finance purchase of the General Raybestos and Rubber Co. of Charleston, S. C. This is an older concern than the local one and operates spinning mills of Raybestos fabrics. The combination, it is stated, means a strengthening of both organizations. The Charleston concern will supply the local concern with most of its material.

Sale of Truck Equipment

NEW ORLEANS, Sept. 3—The equipment of the New Orleans Motor Truck Mfg. Co., which is in receivership, was sold at public auction under a court order Thursday, Sept. 1, at the premises, 5300 Tchoupitoulas Street.

COAST DEALERS SEE BRIGHT FALL COMING

So Confident They Are Ready to Finance Partial Payment Sales

SAN FRANCISCO, CAL., Sept. 5—An important indication of the great confidence the automobile dealers of northern California have in the improvement of conditions beginning next month and extending on through the winter is found in the fact that about 50 per cent of these dealers—by which is meant the retailers of passenger cars—are either already prepared to finance the partial-payment sales of their cars, or are making financial arrangements so to do. Some of the larger dealers, probably about 25 per cent of the dealers in San Francisco, for example, have installed departments to handle this financing of the buyer who cannot finance himself.

Partial-Payment Plan

This step, of course, is an indirect result of the action of the Federal Reserve Bank System in discontinuing the discounting and re-discounting of automobile paper a few months ago. Possibly within the next year or two the automobile industry, and especially the retail department of that industry, will realize that this "shutting down" by the Federal Reserve Banks was one of the most wholesome things that ever happened to the industry. Several of the more progressive dealers, with whom the writer has talked, believed they will be in better shape on their partial-payment sales, and will move more cars, getting better distribution to buyers who really need cars, than they were under the old system, when, as this dealer said, "anybody could buy a car who had a hundred dollars and a smile."

Dealer Gives Summary

E. M. Mark, president of the Mark Motor Co., who was in San Francisco late in August, gave a rather concise yet inclusive summary of the situation.

"The automobile industry will receive a great stimulus this fall, partly because so many automobile dealers are installing departments to finance the partial payment sales of automobiles. Since the Federal Reserve Banks discontinued the re-discounting of automobile paper for the member banks, it has become more and more difficult for the individual of moderate means to purchase a car. Prior to the Federal Reserve Board ruling, the banks always had funds available for discounting lease-contract sales notes. To-day it is difficult to purchase a car on the partial-payment plan, since it burdens the dealer with the necessity of tying up his own funds pending the final payments on the car.

"With the scaling downward of prices, automobile ownership is being brought closer and closer within the means of the average individual."

CANADIAN LEGISLATURE MAY PROHIBIT WOMEN FROM DRIVING CARS

QUEBEC, QUE., Sept. 3—It is understood that at the next session of the Legislature a petition will be received asking legislation to prohibit women from driving automobiles on the grounds that the fair sex has not shown a sufficient degree of skill in the handling of cars.

The petition is launched by a group of professional chauffeurs and will stand scant chance of passing.

S. A. E. BODY DIVISION PASSES ON CAR TYPES

NEW YORK, Sept. 5—The lack of positive identification by means of the present automobile nomenclature having been the cause of much confusion in the minds of purchasers, salesmen and others the Society of Automobile Engineers has given serious thought to this and a committee headed by George J. Mercer has made a report covering the present day practice and made recommendations as to standard nomenclature. The following body types are considered as fundamental in this report:

Roadster, touring, sedan, berline, coupé, coupelet, limousine, brougham, limousine-landaulet, cabriolet and town-car. It will be noticed that the name "runabout" has been eliminated. The report describes each type. A good deal of the confusion of the past has been due to calling two seated cars for four passengers "roadsters." This practice started with the advent of the clover-leaf roadster, followed later by the close coupled roadster and the chummy roadster.

ELECTRIC VEHICLES TO FEATURE ELECTRIC SHOW

NEW YORK, Sept. 3—With exhibits of commercial trucks, industrial trucks, storage batteries, and garage accessories, the electric truck display at the New York Electrical Show will be comprehensive. The show this year is to be held at the 71st Regiment Armory. It opens on Wednesday, September 28, and will continue for ten days.

Among the manufacturers of electric vehicles and vehicle supplies who have already taken space are the Commercial Truck Co., the Lansden Co., the Walker Vehicle Co., the Ward Motor Vehicle Co., the Steinmetz Electric Motor Corp., Walter Motor Truck Co. and the Baker R. & L. Corp. Storage batteries will be shown by the Electric Storage Battery Co., Edison Storage Battery Co., the K. W. Storage Battery Co., Inc., and the General Lead Batteries Co. and several others who have not entered as yet. The show this year is expected to surpass any heretofore given in New York.

ANNUAL FALL SHOW OPENS IN COLUMBUS

All Models Displayed at Auto- motive Exhibition at Ohio State Fair

COLUMBUS, OHIO, Sept. 5—The annual fall show, given under the auspices of the Columbus Automobile Show Co., opened at the Ohio State Fair Aug. 29 to continue for the week. The show opened under the best of conditions, as some very good advertising had been done by the fair management, and crowds were larger than usual. The automobile show occupied the Automobile Building, which was 100 by 400 feet. Anson B. Coates was manager of the show.

Among the cars displayed were the Overland and Willys-Knight, Franklin, Hudson and Essex, Lincoln, Davis, H. C. S., Chevrolet, Stearns, Moon, Hupmobile, Cleveland, Chandler, Allen, Nash, Peerless, Maxwell, Chalmers, Buick, Studebaker, Columbia, Dodge, Oldsmobile, Pierce-Arrow, Reo, Stutz, Haynes, Cadillac, Packard, Oakland, Westcott, Auburn, Grant, Scripps-Booth, Ford, Jordan, Stephens, Lexington, Milburn Electric and Roamer. A few trucks were also included in the exhibit, but the greatest stress was placed on the passenger car end of the display.

Farmers were numerous at the fair, as is always the case, and the automobile show was the center of attraction for agriculturalists. While crop conditions in many sections have not been the best, late rains helped a great deal in making a corn crop and farmers are correspondingly optimistic. There is a tendency on the part of farmers to look around and quite a few sales were made in rural communities. Dealers reported that prospects in farming communities are numerous and many are expected to develop into orders.

One of the developments as regards to the demand from the rural sections is the fact that farmers are in the market for higher class cars. They look at cars costing between \$1,200 and \$3,800. Of course many inquiries for lower priced cars are received, but the tendency appears to be toward the higher priced vehicles.

GOREY PARTS OPENS BRANCH IN BROOKLYN

NEW YORK, Sept. 5—The Gorey Automotive Parts Co., large distributor of authorized parts for engines, gearsets, clutches and universals, has opened a Brooklyn branch at 1369 Bedford Avenue. This is the forerunner of a number of branches to be opened in the near future in other cities. The accounts handled include Borg & Beck, Brown Lipe, Spicer, Hartford, Durston, Kinsler-Bennett, Mogul, Blood, G. B. & S., Rutenber, Ross, Fuller and Peters.

HOOSIER DEALERS WILL DISCUSS LAWS

Association Also Plans to Arrange for Convention at Coming Meeting

INDIANAPOLIS, IND., Sept. 5—A call has been issued for a meeting of the board of directors of the Indiana Automobile Trade Association to be held in this city Sept. 8. In addition to discussing general legislation problems, the directors will take action on the convention, which likely will be held some time during the early winter, since a recent questionnaire sent out to the board showed the majority to favor either November or December in preference to March.

L. M. Shaw, manager of the organization, will recommend that the by-laws with reference to the eligibility of jobbers be changed to conform to the eligibility rules of the National Jobbers' Association in order that the Indiana organization may have an affiliation with the National Jobbers' Association. By changing the rules the Indiana organization hopes to make possible a membership in both organizations by a membership in one.

At the last meeting of the board a recommendation was passed that the State Legislature change the motor vehicle license law so as to permit licenses to be issued in each county instead of in the offices of the secretary of state. The recommendation provided that the various county clerks issue the licenses. At the coming meeting the board will be asked to change this recommendation so that it will provide for the county recorders issuing licenses and provide a fee for this work.

With the county clerks issuing licenses without fees, it is claimed, the work would be neglected, not only because of the lack of fee, but because the county clerk is the busiest official in the counties. By turning over the work to the county recorder, it would be possible to not only issue the licenses, but also have them recorded, thus doing away with the present system of providing for a title certificate. In case of sale of an old machine all that would be necessary would be for the two parties to have the recorder's receipt transferred at the local court house.

GAS SALES WILL HELP PAY FOR STATE HIGHWAYS

PHILADELPHIA, Aug. 31—Beginning Sept. 1, Pennsylvania motorists must pay one cent a gallon for the State tax on gasoline, as this tax is to be shouldered by the consumer. Gasoline station managers have been instructed to keep an accurate account of all sales and make prompt return to the State authorities. Gasoline is now selling in this city at 23 and 24 cents. The tax is to be added to the ordinary price.

Failure to make monthly returns to

the Department of the State Auditor General, or refusal to permit employees of that department to examine a dealer's books, subjects him to \$1,000 fine, or six months' imprisonment, or both. Agents of the State who violate the confidential nature of such information are subject to similar penalties.

One-half of the proceeds of the tax goes to the county in which the tariff is collected, to be used solely for construction.

Pretty Tough!

"MY tires are as tough as the meat I once sold you," is the way that Charles Lawson of Columbus, Ind., former butcher, advertises his tire shop. In his ads he also expresses the hope that his old customers will remember the long mileage they got from some of the steaks he sold them and think of him when they need tires.

DURANT SELECTS SITE FOR ASSEMBLY PLANT

OAKLAND, CAL., Sept. 5—R. C. Durant, president and general manager of the Durant Motor Co. of California, has definitely announced the site of the Durant assembly plant in Oakland to be at East 14th Street and 106th Avenue. The site consists of 18 acres, on which will be built exclusively class A buildings, construction to be of concrete throughout, with buff pressed-brick facings and gray granite trimmings. The main building will have a frontage of 600 feet, from which will run three wings, each extending 400 feet, thus forming courts which will allow all windows the greatest possible amount of air and light. All buildings are to be of two stories.

Vacation at Packard Plant

DETROIT, Sept. 3—Packard Motor Car Co., in compliance with a manufacturing plan formed early in the season, has closed for a two weeks period to give its employees a two weeks' vacation. The factory will reopen on Sept. 10 on its regular manufacturing schedule.

Employees who have been with the company ten years are receiving full pay for the vacation period, those five years with the company are receiving half pay. Between 500 and 600 men will be kept at work to turn out rush orders, those entitled to vacations receiving double compensation.

Used Car Show on Coast

OAKLAND, CAL., Sept. 3—The used car dealers of the East Bay district, which includes the cities of Alameda, Oakland, Emeryville and Berkeley, will put on a used-car show in Idora Park, this city, Sept. 10 to 18.

USED CAR SITUATION BETTER IN SPOKANE

New Car Sales Are Increasing as General Business Conditions Improve

SPOKANE, WASH., Sept. 5—With improved business conditions and credit allowances gradually speeding up sales of new cars, Spokane automobile dealers are finding that the used car situation is assuming a less drab aspect.

Sales of used cars are dependent upon new car sales, according to E. Stock, managing-secretary of the Spokane Automobile Chamber of Commerce. Seventy-five per cent of new car sales entail used car transactions, according to Mr. Stock.

"The used car situation is always a step or two behind the new car market, for at least 75 per cent of dealing in new cars is done with persons already owning cars," said Mr. Stock. "During the recent period when the automobile industry openly marked time the used car situation assumed rather discouraging proportions."

"At present the used car situation is more favorable to both purchaser and dealer. The situation is no doubt much more favorable to the purchaser than it will be during the winter months, when the car sales season is expected to slow up somewhat. When this winter period of less numerous new car sales comes, dealers will be careful about taking used cars in trade. The exchange valuation allowed will necessarily be lower and no trades will be made unless the dealer is reasonably certain of a quick turnover."

DURANT MOTORS SOON TO ORGANIZE IN CANADA

TORONTO, Aug. 31—Durant Motors of Canada, Ltd., is soon to be organized. The company will begin shortly to assemble the Durant four for Canadian distribution and eventually, according to W. C. Durant, will build here the entire car, even the electric system and tires. Durant has purchased a former munition plant at Leaside near Toronto. There 2500 men will be employed and an assembly building will be erected for use right away and manufacturing on a considerable scale will be under way, Durant states, about March 1. Production of 100 cars a day is planned. A Toronto man whose identity is not known will be associated with the American manufacturer.

J. S. Stevenson Dies

DETROIT, Aug. 31—James S. Stevenson, vice-president of the Kelsey Wheel Co., died here Tuesday after a two years illness. He has been a resident of Detroit since 1887, joining Berry Bros., Inc., and later becoming general manager of that company.

TEXAS DEALERS SAY BUSINESS IS GOOD

Many Behind in Deliveries— Report Sales Far in Excess of Expectations

DALLAS, TEX., Sept. 5—If there is anything dull about the automobile business, Dallas dealers have failed to find it, especially during August when it was expected times would be pretty dull. A canvass of the dealers here shows that they are doing more business than they had expected and are now far behind with deliveries. In some instances, it is said, slow deliveries are due to factories being behind, but in most cases the dealers are just selling cars faster than they can get them from the factories.

Places Big Order

The Nash-McLarty Co. this week placed a hurry-up order for twenty carloads of cars. F. E. McLarty, president of the company, said business is picking up all over the territory and there has been no cessation whatever in the local demands. He declared his company placed more cars during the first twenty days of August than it expected to sell during the entire month, and that the August business had been better than any month of the year. McLarty said there is an indication that the truck business during the next few months is going to be something startling. He said men and firms have been wanting trucks for some time and are just now finding that they must have them.

The Trinity Motor Co., Dodge agents, said it is now 110 cars behind deliveries on retail sales and 20 cars short on wholesale sales. R. L. Jackson, president of the company, declared that frequently during the past few weeks men have paid bonuses to get a car. He said business is beginning to look like old times and that this fall will undoubtedly see the automobile business back to normal in Texas.

Can't Fill All Orders

Paul A. Stevenson, manager of the Oakland Motor Co. here, said he has more orders for Oaklands right now than he can possibly fill in the next thirty days. Stevenson declared he had already closed a contract for the delivery of more than 1000 Oaklands in this territory and that he expected no trouble in disposing of them. Right now his company is remaining open until nine o'clock evenings in order to show new models to prospective buyers, and there are few evenings that a sale is not made.

C. A. Sears, manager of the Stapleton-Brown Motor Co., Briscoe dealers, said this week the company had just disposed of one shipment of Briscoes and that another will be unloaded in a few days. He reported sales improving over the territory and said business has been better than he expected it.

A half score other dealers reported increased sales during August and said

the business in this section is about back to normal.

A canvass of the retail trade in Dallas showed increased sales in August over those of July, and July sales better than those of June. These sales, however, are not up to those of eighteen months ago, hence the returns or net proceeds will be considerably lighter.

Dealers declare the reduced prices of automobiles, several of which have been made this month, coupled with plenty of money from grain crops and more coming from cotton, has boosted the automobile business in Texas.

Truck dealers have reported increase in business and they are expecting greater increases during the coming month.

Accessory men say business is picking up. Tire men report increased sales, and garagemen are doing better business than they have this year.

Banks, however, continue to fight shy of handling automobile paper, and the retailers are getting sufficient amounts of cash with sales to continue the business without the aid of bankers.

DENBY REFINANCING MEETS WITH FAVOR

DETROIT, Sept. 3—Stockholders of the Denby Motor Truck Co. agreed to the refinancing program outlined by the board of directors, by which \$300,000 first mortgage bonds and \$650,000 first preferred stock will be issued to meet current liabilities and to provide working capital. The new stock issue will bring the company's capitalization to \$1,400,000. None of the stock will be offered at public sale.

In a statement to stockholders, 85 per cent of whom were represented at the meeting, President A. S. More said the new capital would place the company in an advantageous position to seek new business. Operations at the factory will be increased in September to meet demand for the $\frac{3}{4}$ -ton and 1 $\frac{1}{2}$ -ton models.

Cancel Insurance Policies

GREENSBORO, N. C., Sept. 3—The Automobile Insurance Co. of Hartford, Conn., has notified its Greensboro agent, the Merrimon Insurance Agency, that effective at once all North Carolina insurance policies on automobiles protecting the owners from fire and theft will be cancelled. The extraordinary number of fires and thefts are responsible for the cancellation. The company was paying out about twice as much on its North Carolina insurance as it received.

Ohio Sales Hold Firm

TOLEDO, Sept. 5—While the manufacturing and distribution of automobiles in the city is falling off, many dealers are reporting progress in the smaller cities and agricultural centers.

The marketing of crops and the delay of the buying boom has just struck the small towns and country dealers so that the total volume of business is holding firm, taking a large section of the State.

PORTLAND DEALERS FULL OF CONFIDENCE

Satisfied Situation Is Steadier —Say Peak of Depression Has Passed

PORTLAND, ORE., Sept. 5—Automobile dealers in Portland are looking toward the fall and winter season, the most quiet period of the year for the automobile business, with confidence, and on the whole the situation appears to be steadier and filled less with fears and misgivings that was the case last year. The fact that the price adjustments are practically at an end and that the industry has fast got back to a pre-war basis has given a great deal of stability to the situation.

While some few belated price reductions have been announced the past few days the dealers and the public in general has come to the conclusion that a stable condition with relation to price has been reached. Portland dealers, according to a number of the leading figures along the row, are not looking forward to any unusual business during the fall and winter, but have confidence that next spring will bring about a healthy, prosperous condition. A number of leading dealers have declared that they feel confident they can "sit tight" and conduct a fair business during the fall and winter and be in a strong position to take advantage of a break in the clouds next spring.

See Two Factors

Two factors lead the local dealers to look for attractive conditions in 1922, in addition to the general feeling throughout the country that the peak of depression has been passed. These are the unusually heavy crops in the farming sections of Oregon this season and the other is the phenomenal increase in automobile tourist travel in Oregon.

A number of the dealers have recently returned from tours of the central and eastern sections of the state, combining business with pleasure in most instances, and report a marked improvement in the situation of the farmers. Crops have been unusually big, and if fair prices are secured the farmers will be in better shape than for a year. This is reflected in an increase in sales throughout these sections, according to Portland distributors, and the past two weeks has seen a notable improvement in this regard. Practically no cars have been sold in the farming areas for months.

In regard to the second point, tourist travel has been heavier in Oregon this year than would have been dreamed of several years ago. Some indication of this is given by a report from the Portland public automobile camp grounds this week that approximately 200 new cars, with perhaps close to 500 passengers, are reporting at the park every day. This is, of course, only a small proportion of the total number of tourists.

ASSOCIATION ACTIVITIES

Coast Meh Have Big Meeting

SAN FRANCISCO, CAL., Sept. 3—The northern division of the California Automobile Association held its semi-annual meeting at Al Tahoe, on the shores of Lake Tahoe, in the high sierras, Aug. 20 and 21. More than 100 delegates from all sections of the state north of the Thachepi Mountains were in attendance, and there was more enthusiasm among the delegates than noted at previous meetings. George Haberfelde, state president, occupied the chair throughout the meeting, and Robert W. Martland, secretary-manager, was on his job, as usual. Martland's report showed the association to be in good financial condition and to be growing steadily and rapidly.

The principal discussion of the convention centered on the co-operative buying projects that are springing up continually in all parts of California. It was shown that some of the less well-known firms are offering large discounts to get business. This was disapproved, and the automobile tradesmen were shown clearly that giving discounts where they are unwarranted, or in larger amount than good business acumen would dictate, will soon wreck the retail business, either in automobiles or in equipment for them. It was demonstrated to the delegates that the margin of profit is so small that those in the business will "go into the discard if they do not get full profits." Cost of doing business in these lines was shown by figures and charts.

The first day of the convention was given over to craft discussions, the association being divided into various crafts, so that all the men in the same line of business meet together and thresh out their difficulties and air their problems. The second day was devoted to the general meeting, when reports of the crafts were read and general discussion given full time. Effects of price reductions on the dealers and on the trade in general were presented by various dealers. It was pointed out by L. H. Bennet, a commercial expert, that few garages in the state apply real selling methods to their businesses. Mr. Bennet demonstrated that a few dollars a day in extra sales would cover the overhead on every one of these garages for some time to come. Reports indicate that the failures among members of the association were some 60 per cent fewer in number than among those in the same lines outside the association.

The next semi-annual convention of the association will be held in February, in San José, California, the exact date to be fixed later.

Plan Hoosier Motor Show

INDIANAPOLIS, IND., Sept. 5—At a largely attended meeting of the Indianapolis Automobile Trade Association at the association's offices allotment of exhibit spaces was made for the twenty-third semi-annual motor show, to be held in the Manufacturers' building at the state fair ground in conjunction with the state fair, Sept. 5 to 10. John B. Orman, manager of the show, pleased the members with a report that the number of exhibitors for this year's autumnal exposition will exceed last year's record. One hundred and eleven firms were represented at the meeting, which was presided over by N. H. Cartinhour, president of the association.

Among the spaces assigned was one for the newest entry in the motor market, the Wills-Saint Claire, one of the most discussed auto-

mobiles in recent years. The Indianapolis distributor for this newcomer will be the Coffin-Brown Co. The same firm will have all of Indiana except the northern tier of counties in its territory. The Bulck also is to display its new four-cylinder models at the forthcoming show. The decision was made at the meeting, following a motion by Paul Keyes of the Peterson-Keyes Co. to keep the state fair show open at night, without admission fee, on Wednesday, Thursday and Friday. The show was not open at night last year, and this was the cause of much regret among state fair visitors. Orman told the members of the association that the exhibits for the entire state fair were in excess of any previous year, and the largest crowds in the history of the exposition was expected.

A letter was read from Denver Automobile Dealers Association thanking the Indianapolis association for its generous gift to the Pueblo (Col.) automobile dealers, all of whom suffered practically total loss in the recent flood. The Indianapolis association gave \$250, the highest amount contributed by any automobile organization except Kansas City, which equaled it. Following the allotment of space the members of the association held a dealers' meeting to discuss trade subjects. Robert H. Losey was in the chair. At the close of this meeting Manager Orman thrilled the members with an elaborate provision of cider and doughnuts.

St. Paul's Campaign

ST. PAUL, MINN., Sept. 3—St. Paul Automobile Dealers Association opened an extensive expansion campaign on Monday night, Aug. 22, with P. F. Drury, assistant general manager of the National Automobile Dealers Association, as speaker at a banquet attended by 250 automotive men under the direction of Dan Wiegler, former secretary of the St. Paul Chamber of Commerce, who is now acting as campaign manager for various associations.

The automobile dealers of St. Paul have invited all branches of the trade to join with them in membership in a new association to be known as the St. Paul Automotive Trade Association.

As a result of Drury's visit, the St. Paul dealers expressed their desire to affiliate and co-operate with the N. A. D. A. in every activity possible.

The above meeting completed a tour of the west and northwest made by Drury, which included a general survey of the work of the Intermountain Association, the Oregon Association, the Washington Association and Idaho Association, with meetings at Salt Lake, Boise, Portland, Tacoma, Spokane and a state convention of the Washington Automobile Chamber of Commerce at Seattle.

The above trip was originally planned for the primary purpose of assisting the Washington Automobile Chamber of Commerce and bringing about the amalgamation of the Washington Automotive Trades Association, which has recently been organized, with that of the Chamber.

Conventions of both associations passed resolutions favoring such a step and appointed committees which have already met and elected a new corps of officers and drawn up a constitution and by-laws which require that all dealer members of the proposed new "Washington Automotive Trade Association" shall be members of the N. A. D. A. also.

REORGANIZATION OF LOCOMOBILE DECIDED

Company Divorced from Hares Motors Following Meeting of Stockholders

BRIDGEPORT, CONN., Sept. 3—Reorganization of the Locomobile Co. through which Colonel Elmer H. Havens, junior member of the firm of Hunter & Havens of this city, president of Bridgeport Board of Education and prominent in financial, industrial, civic and fraternal circles, becomes head of the corporation and has already assumed charge of the big Main Street plant, was consummated at New York, according to announcement made here. Frank R. Hickman is associated with Colonel Havens, as vice-president and treasurer of the corporation.

Revolutionary Changes

These revolutionary changes and reorganization of the corporation were perfected at a meeting of the stockholders in New York. Through them the Locomobile Co. is wholly divorced from Hares Motors, Inc., which had charge of manufacturing and selling the automobiles built at the Locomobile plant here. Mr. Hickman was a former president of the Locomobile Co. of America, which was organized April 1, 1920, as the Locomobile Co. He was also treasurer of the Hares Motors, Inc.

President Havens confirmed reports of his election and the reorganization of the corporation, when interviewed at his Southbury, Conn., summer home. However, he was not ready to make a statement as to the plans for the new organization, but said that operations will be resumed at the local plant as soon as business conditions warrant. Colonel Havens and Mr. Hickman represent the creditors of the Locomobile Co. in the latest reorganization.

Rumors Not Borne Out

Rumors of a dissolution of Hares Motors, Inc., which were in circulation here a number of weeks ago, are not borne out by the change. It is pointed out that the connection of Hares Motors, Inc., with the Locomobile Co., to which the name of the local corporation was changed last year, was in the form of a contract for operation of the plant and the selling of its products. At that time the officers of Hares Motors were made officers of the Locomobile Co. Those officers have now resigned and have been succeeded by the local men, Messrs. Havens and Hickman.

The contract between the Locomobile Co. and Hares Motors, dissolved yesterday by the reorganization of the former corporation, took effect April 1, 1920, and at the same time the Mercer Motors entered into a similar agreement. The Mercer Co. withdrew from the agreement April 1 last. Hares Motors is a separate corporation, according to E. L. Larson, works manager of the local plant, and the reorganization and withdrawal of the Locomobile Co. does not affect it.

CHANGES IN THE TRADE

C. H. Forman Motor Sales Co., Columbus, Ohio, has purchased the assets of the Columbus Armleder Co. and will distribute the Armleder, Stewart and Day-Elder lines of motor trucks.

Deming-Todd Motor Co., Columbus, Ohio, chartered some time ago with an authorized capital of \$50,000, has taken the central Ohio distributing agency for the Wills Saint Claire. A salesroom and service station has been opened. Grant W. Deming is president and Charles E. Todd secretary-treasurer.

E. L. Waight, Fresno, Cal., who was formerly with Scripps-Booth, has been appointed a factory representative of the Chevrolet and will cover the central California territory.

Glouster Supply Co., Cincinnati, Ohio, has been appointed distributors for the Benzer lens, which is manufactured in New York and which has been approved for use in Ohio.

Griffith Motor Car Co., Tacoma, Wash., has been appointed district representatives for Graham Bros. truck, which will be handled in connection with the Dodge line.

Russell H. Lawson Automobile Co., Portland, Ore., has taken over the distribution of Columbia cars in Portland in Multnomah County.

Howell-Swift Tire Co., Portland, Ore., has been appointed distributor for Savage tires in western Oregon and the Columbia river counties in Washington.

Harry W. Anderson, San Francisco, Cal., has been appointed general sales manager for the Duesenberg Automobile & Motors Co.

L. H. Thompson, former University of California athlete, has been made sales manager in the San Francisco territory for the Ruckstell Sales & Mfg. Co., which makes the Perfecto two speed axle.

R. C. Durant, president and general manager of the Durant Motors, Inc., California, has appointed H. D. Casey as advertising manager. Casey's duties include direction of advertising and publicity in five western states, the Orient, the Philippine Islands, the Hawaiian Islands, Australia, New Zealand and part of Mexico.

J. A. Cunard, San Francisco, has been appointed freight transportation supervisor for the state of California by Earl C. Anthony. Packard distributors. Cunard will have general supervision of Packard truck sales in all the Anthony stores throughout the state.

Allen F. Parkes, Nashville, Tenn., vice-president and general manager of the Chalmers Co. of Tenn., has resigned and will leave soon to take charge of the sales department of the Packard-Nashville Co.

Elmore Hardware Co. of Elmore, Ohio, which has handled tractors for the past five years, has just been made distributor for the Bates Steel Mule tractor for that territory.

Tampa-Overland Co., Tampa, Fla., has just been named distributor in that section for the Marmon car, an agency held for some time by the Hulsey Automobile Agency. C. R. Brooks will be in charge of the Marmon sales for the Tampa-Overland Co.

William A. Sutherland, for several years wholesale manager for Mainwaring & Goodman, Philadelphia distributors of Day-Elder trucks and prior to that for the truck department of the Locomobile Co. of America in Philadelphia, has been appointed manager of the commercial car department of the Thornton-Fuller Automobile Co. in charge of sales of Dodge Bros. business cars and Graham Bros. trucks.

Mission Motor Co., Los Angeles, has been appointed Dort distributor for southern California. George Goodrum, president of the company, is a veteran Coast distributor, and associated with him is F. A. Petrie, who was formerly assistant general sales manager for Dort at the factory.

Studebaker Corp. of America has moved its Detroit sales branch into the new headquarters at 3646 Woodward Avenue.

Morris H. Anderson has assumed charge of the Detroit branch of Mack International Motor Truck Corp., succeeding W. W. Helte, transferred to the head office in New York. Anderson was formerly assistant manager of the central territorial division for Mack with headquarters in Chicago. Before that he was with Packard.

R. L. Zak and F. C. Scharafin have formed a partnership and will distribute International trucks in the Sangamon County, Illinois, territory. Zak will look after the service end of the business and his partner the sales and office departments.

Central Implement Sales Co. has been organized at Springfield, Ill., with E. A. Rinck as president and W. H. Filler as secretary and will distribute White trucks and Cletrac tractors in Sangamon County.

J. D. Fletcher has been appointed sales manager for the Dixon Motors, Ltd., Ottawa. The firm is local sales agent for Studebaker.

The Beardslee Automobile Co., Saginaw, Mich., has been appointed distributor for the Mitchell cars in eastern Michigan.

The Saginaw Cadillac Co., Saginaw, has been appointed distributor for the Overland and Willys-Knight cars.

Palmetto Automobile Sales Co., Spartanburg, S. C., has received the agency for the Franklin. The Palmetto Sales Co. covers the counties of Spartanburg, Cherokee and Union. Heretofore this territory has been represented by Bryan Floyd as a sub-dealer under the Greenville representative.

Harry T. Forbes, who conducts the Baltimore Garage and maintains a large accessories department, will open the Baltimore Automobile Shop. He will specialize at this place in batteries, battery service, lighting and ignition systems.

ANTI-GLARE LAW IN EFFECT; OHIO LENS DEALERS DO BIG BUSINESS

COLUMBUS, OHIO, Sept. 3—Lens manufacturers and agents have been rushed in Ohio supplying the demand for anti-glare lens. The State law defining the lens to be used became effective Aug. 15 and the lens people have had a large business. The Ohio Highway Department has approved about threescore of different lenses.

A complication has arisen over several questions which have been submitted to the attorney general for an opinion. After the Highway Commission has approved a lens or device is the motorist simply required to place the device in the headlight without focal adjustment, or is the motorist also required to see that the lens or device is in proper focal adjustment.

DEALERS SAY TEXAS SALES ARE IMPROVED

In Some Cases Business Is Held Up by Slow Deliveries from Factories

DALLAS, TEX., Sept. 3—If there is anything dull about the automobile business, Dallas dealers have failed to find it, especially during August when it was expected times would be pretty dull. A canvass of the dealers here shows that they are doing more business than they had expected and are now far behind with deliveries. In some instances, it is said, slow deliveries are due to factories being behind, but in most cases the dealers are just selling cars faster than they can get them from the factories.

A canvass of the retail trade in Dallas showed increased sales in August over those of July and July sales better than those of June. These sales, however, are not up to those of eighteen months ago, hence the returns or net proceeds will be considerably lighter.

Dealers declare the reduced prices of automobiles, several of which have been made this month, coupled with plenty of money from grain crops and more coming from cotton, has boosted the automobile business in Texas.

Truck dealers have reported increase in business and they are expecting greater increases during the coming month.

Accessory men say business is picking up. Tire men report increased sales, and garagemen are doing better business than they have this year.

Banks, however, continue to fight shy of handling automobile paper and the retailers are getting sufficient amounts of cash with sales to continue the business without the aid of bankers.

OLDS MOTOR REDUCES CAR AND TRUCK PRICES

NEW YORK, Sept. 5—The Olds Motor Works announce that the following new prices for Oldsmobile passenger cars and trucks were effective Monday, Aug. 29:

	Old	New
34-A 4 cylinder car, touring..	\$1,345	\$1,145
Roadster	1,325	1,145
Coupe	1,895	1,645
Sedan, 5 passenger.....	2,100	1,845
Small 8, No. 47, touring.....	1,725	1,625
Coupe	2,225	2,185
Sedan, 5 passenger.....	2,425	2,425
Large 8, No. 46, touring, 7 passenger	1,875	1,735
Pacemaker, 4 passenger..	1,825	1,735
Sedan, 7 passenger.....	2,775	2,635
Truck, chassis.....	1,250	1,095
Chassis with cab.....	1,325	1,175
Chassis with express body and top	1,395	1,245

Roamer Makes Cuts

NEW YORK, Sept. 5—The Roamer Motor Car Co. has announced a second reduction in all its models.

	Old	New
2 passenger roadster.....	\$3,150	\$2,750
7 passenger touring.....	3,250	2,750
4 passenger coupe.....	3,985	3,850
5 passenger sedan.....	4,100	3,950

COMING EVENTS

SHOWS

Indianapolis	Sept. 5-10	Automobile and Accessory Show in conjunction with Indiana State Fair, conducted by Indianapolis Automotive Trade Ass'n, John B. Orman, Mgr.
Ottawa, Ont.	Sept. 9 to 17	Ottawa Motor Show.
Cincinnati	Oct. 1-8	Fall Automobile Show, Cincinnati Automotive Dealers' Ass'n, Music Hall.
Pittsburgh	Oct. 15-22	Fall Show under auspices of Automotive Association.
Jersey City	Nov. 14-19	Second Annual Automobile Show, Hudson County Automotive Trade Association, Fourth Regiment Armory.
New York	Nov. 27-Dec. 3	Automobile Salon, Hotel Commodore.
Chicago	January	Automobile Salon, Drake Hotel.
New York	Jan. 7-13	National Automobile Show, under auspices of National Automobile Chamber of Commerce, Grand Central Palace.
Louisville, Ky.	Feb. 20 to 25	Louisville Automobile Show, auspices Louisville Automobile Dealers' Association.
Chicago	Jan. 28-Feb. 3, 1922	National Automobile Show, under auspices of National Automobile Chamber of Commerce, Coliseum.
Winnipeg	Feb. 6-11, 1922	Automobile Equipment Show, Western Canada Automotive Association.
Santiago, Cuba	March, 1922	Annual Automobile Show.
Rio de Janeiro, Brazil	Sept., 1922	Automotive Exhibition in connection with Brazilian Centenary.

RACES

Los Angeles.....Nov. 24.....Speedway Events.

CONVENTIONS

Chicago	Oct. 12-14	National Implement & Vehicle Association Convention, Congress Hotel.
Chicago	Nov. 14-19	Annual Meeting and Business Exhibit of Automotive Equipment Association.
New York City	Nov. 22-24	Semi-Annual Convention of Factory Service Managers, N. A. C. C., H. R. Cobleigh, Secretary.

The New Car and Truck Description Index

Giving the date and page number on which they appeared

Cars

Ace	Jan. 12, 1921-15
Ambassador	Feb. 2, 1921-11
Buick Four	Aug. 10, 1921-28
Collinet (Salon)	Nov. 24, 1920-18
Durant Four	Aug. 10, 1921-30
Duesenberg 8	Nov. 17, 1920-33
Essex (Cabriolet)	Nov. 10, 1920-35
Fergus, 1921	Jan. 12, 1921-23
Forster	Aug. 25, 1920-33
Friend	Jan. 12, 1921-14
Globe Four	Oct. 20, 1920-32
Handley-Knight Four	Nov. 17, 1920-32
Haynes Model 50	Jan. 12, 1921-20
Jackson Four	Jan. 12, 1921-18
Kelsey	Dec. 1, 1920-31
Kenworthy 8	Jan. 12, 1921-13
Kissel Coach Sedan	Jan. 19, 1921-21
Lafayette (Coupe)	Oct. 27, 1920-40
Lexington Series T	Jan. 5, 1921-32
Liberty (Coupe)	Aug. 18, 1920-31
Lincoln	Sept. 8, 1920-34
McFarlan Type 147	Oct. 27, 1920-41
Merced (limousine)	Aug. 18, 1920-37
Mercedes (Post War Model)	Oct. 20, 1920-33
Milburn Electric (38D & 38T)	Jan. 12, 1921-21
Moller	Mar. 30, 1921-21

Nash Four	Nov. 10, 1920-34
National (Sextet Phaeton)	Dec. 15, 1920-36
Navarre	Jan. 12, 1921-13
Northway 6	Jan. 12, 1921-13
Oldsmobile Light 8	Mar. 9, 1921-33
Oldsmobile (Model 43-A)	Dec. 15, 1920-33
Packard Single Six	Sept. 29, 1920-32
Paige Big Six (Six-66)	Sept. 1, 1920-34
Parenti	Jan. 12, 1921-14
Piedmont 4.30	June 29, 1921-30
Pierce-Arrow	Nov. 24, 1920-32
Premocor Special	Feb. 9, 1921-23
Rolls-Royce	Mar. 23, 1921-32
R & V Knight Four	Jan. 12, 1921-16
Scripps-Booth Six	July 13, 1921-32
Sheridan Eight	Oct. 6, 1920-32
Stanwood Six	Sept. 15, 1920-31
Sterling Knight	Feb. 2, 1921-11
Stevens-Duryea	Dec. 1, 1920-30
Wills-Sainte Claire	Mar. 16, 1921-28
Wills Sainte Claire Roadster	July 20, 1921-33

Trucks

Acme (¾ ton)	April 13, 1921-33
Akron Multitruck (1 ton)	Feb. 9, 1921-32
Aries (5 ton)	Jan. 12, 1921-49
Armleder (1 ton)	Nov. 10, 1920-37

NEW PARKER CAR WILL BE MADE IN MONTREAL PLANT

DETROIT, Sept. 3—Parker Motor Car Co., Ltd., has been formed in Montreal to manufacture the Parker car, a 6-cylinder assembled vehicle, with a new adaptation of spring suspension designed by Wright-Fisher Engineering Co., this city, to meet special road conditions in Canada. The company is capitalized at \$10,000,000.

Production plans are being hurried through so that cars may be available at the time of the Montreal show. It

is expected to build about 4000 cars a year, and the price on the open models will not exceed \$3,000. The company plans to buy at least 65 per cent of its parts in Canada.

New Models for Preston

BIRMINGHAM, ALA., Sept. 3—The Preston Motors Corp. has announced five Premocor models for production at their plant at Birmingham to commence in September. These will be built on the standard chassis used by this company.

CHARLES J. GLIDDEN NOW HEADS MARTIN MOTOR

SPRINGFIELD, MASS., Sept. 1—Charles J. Glidden, well known in the automobile world as the donor of the Glidden trophy and the originator of the Glidden tours, has reentered commercial life as president of the Martin Motor Co., Springfield, Mass. This is a recently organized company which will manufacture a small three-wheel car designed by Charles H. Martin of the Martin Rocking Fifth Wheel Co.

Specifications of Current Passenger Car Models

NAME AND MODEL	Engine Make	Cylinders, Bore and Stroke	WB	Tires	2-Pass.	5-Pass.	7-Pass.	Coupe	Sedan	NAME AND MODEL	Engine Make	Cylinders, Bore and Stroke	WB	Tires	2-Pass.	5-Pass.	7-Pass.	Coupe	Sedan
Ace.....G	Guy	6-3 1/2 x 5	123	32x4	\$2975	\$2975	\$3680	\$3680	Maibohm.....B	Falls	6-3 1/2 x 4 1/2	116	32x4	\$1575	\$1575	\$2395	\$2395
Ace.....H	H.S.	6-3 1/2 x 5	123	32x4	2975	2975	.....	3680	3680	Marmen.....34	Ow.	6-3 1/2 x 5 1/2	136	32x4 1/2	4185	3985	4875	5275
Ace.....L	H.S.	4-3 1/2 x 5	116	32x4	2280	2280	.....	.....	.....	Maxwell.....25	Ow.	4-3 1/2 x 4 1/2	109	30x3 1/2	845	845	1445	1545
Alben.....Series 43	Ow.	4-3 1/2 x 5	110	32x4	\$1385	1385	.....	2195	.....	McFarlan.....1921	Ow.	6-4 1/2 x 6	140	33x5	6300	6300	7500	7500
Ambassador.....R	Cont.	6-3 1/2 x 5 1/2	136	33x5	.....	4500	4500	6500	.....	Merced.....Series 5	Ow.	4-3 1/2 x 6 1/2	132	32x4 1/2	3950	3950	5150	5650
American.....C	H.S.	6-3 1/2 x 5	127	32x4	2195	2195	.....	3150	.....	Merit.....Cont.	Ow.	6-3 1/2 x 5 1/2	119	32x4	2245	2245	.....	.....
Anderson.....Series 49	Cont.	6-3 1/2 x 4 1/2	130	32x4	2195	1945	2795	2795	.....	Motor.....R & RR	Dues.	4-4 1/2 x 6	129	32x4 1/2	5500	5500	.....	.....
Apperson.....8-21-S	Ow.	8-3 1/2 x 5	130	34x4 1/2	.....	3000	3250	4500	4500	Metz.....M6	Rut.	6-3 1/2 x 5	120	32x4	1995	1995	2795	2895
Apperson.....Anniversary	Ow.	8-3 1/2 x 5	130	34x4 1/2	.....	3500	3750	.....	.....	Mitchell.....F-40	Ow.	6-3 1/2 x 5	120	33x4	1490	1490	2590	2690
Autorn.....6-51	Cont.	6-3 1/2 x 4 1/2	121	32x4	1870	1695	1760	2475	2495	Mitchell.....F-42	Ow.	6-3 1/2 x 5	127	33x4	.....	1795	.....	.....
Beggs.....28T	Cont.	6-3 1/2 x 4 1/2	120	33x4	1775	1775	.....	2675	2775	Moller.....A	Ow.	4-2 1/2 x 4	160	27x3 1/2	2000	.....	.....	.....
Bell.....4-32	H.S.	4-3 1/2 x 5	114	31x4	.....	1495	.....	.....	.....	Monroe.....S-9 & 10	Ow.	4-3 1/2 x 4 1/2	115	31x3 1/2	1285	1295	.....	.....
Bell.....6-50	H.S.	6-3 1/2 x 5	124	32x4	.....	1695	.....	.....	.....	Monroe.....S-11 & 12	Ow.	4-3 1/2 x 4 1/2	115	32x4	.....	2075	2175	
Biddle.....B1	Buda.	4-3 1/2 x 5 1/2	121	32x4	3475	3475	.....	3975	.....	Moore.....6-48	Cont.	6-3 1/2 x 4 1/2	122	32x4	1985	1985	2485	2685
Birch Super-Four.....H.S.	.....	4-3 1/2 x 5	117	33x4	1195	1195	1245	2295	1795	Moore.....6-68	Cont.	6-3 1/2 x 5 1/2	125	32x4 1/2	.....	2485	.....	3485
Birch Light Four.....LeR	.....	4-3 1/2 x 5 1/2	108	30x3 1/2	1045	1045	.....	.....	.....	Murray-Mac Six.....Cw.	Ow.	6-3 1/2 x 5 1/2	128	34x4 1/2	4250	4250	.....	.....
Birch Light Six.....H.S.	.....	6-3 1/2 x 5	117	33x4	1395	1395	1445	.....	1995	Nash.....G31-7	Ow.	6-3 1/2 x 5	121	33x4	1525	1545	1695	2395
Bow-Davis.....21S	Cont.	6-3 1/2 x 5 1/2	126	33x4 1/2	2385	2385	.....	.....	.....	Nash.....G32	Ow.	6-3 1/2 x 5	127	34x4 1/2	.....	1695	.....	.....
Brewster.....91	Ow.	4-4 1/2 x 5	125	32x4 1/2	7000	7000	.....	10500	.....	Nash Four.....41-4	Ow.	4-3 1/2 x 5	112	32x4 1/2	1175	1195	1735	1935
Briscoe.....4-34	Ow.	4-3 1/2 x 5	109	31x4	1085	1085	.....	1685	1685	National Sextet.....BB	Ow.	6-3 1/2 x 5 1/2	130	32x4 1/2	2990	2990	3990	3990
Buck.....S-21 A	Ow.	2-3 1/2 x 3 1/2	90	28x3	395	.....	.....	.....	.....	Nelson.....D	Ow.	4-3 1/2 x 4 1/2	104	32x4	1750	.....	.....	.....
Buck.....1922-34-35-36-37	Ow.	4-3 1/2 x 4 1/2	109	31x4	935	975	.....	1475	1650	Nema.....1C	Cont.	6-3 1/2 x 4 1/2	128	32x4 1/2	2800	2850	3700	3700
Buck.....1922-44-5-6-7	Ow.	6-3 1/2 x 5	118	33-44	1495	1525	.....	2135	2435	Northway.....Cw.	Ow.	6-3 1/2 x 5	128	33x5	4200	4200	5600	5400
Buck.....1922-48-50-50	Ow.	6-3 1/2 x 5 1/2	124	34x4 1/2	.....	1735	2325	2635	.....	Norwalk.....430-KS	Lyc.	4-3 1/2 x 5	116	32x3 1/2	1035	.....	.....	.....
Buck.....E.C.A.	Lyc.	4-3 1/2 x 5	116	33x4	.....	1195	.....	.....	.....	Oakland.....34-C	Ow.	6-2 1/2 x 4 1/2	115	32x4	1095	1195	1625	1725
Buck.....E.C.B.	Rut.	6-3 1/2 x 5	116	33x4	1345	.....	1750	1850	.....	Ogden.....6-68	Ow.	6-3 1/2 x 5 1/2	134	33x5	3750	3900	5000	5400
Cadillac.....59	Ow.	8-3 1/2 x 5 1/2	132	35x5	.....	3940	.....	5190	.....	Oldsmobile.....43-A	Ow.	4-3 1/2 x 5	115	32x4	1145	1145	1645	1845
Carroll.....C	Roch.	6-3 1/2 x 5	128	32x4 1/2	3185	3185	.....	.....	.....	Oldsmobile.....37-A	Ow.	6-2 1/2 x 4 1/2	112	32x4	1450	1450	2145	2145
Carr.....V	Cont.	6-3 1/2 x 5 1/2	126	34x4 1/2	2250	2250	2900	3285	.....	Oldsmobile.....46	Ow.	8-2 1/2 x 4 1/2	122	33x4 1/2	1735	1735	2635	2635
Chalmers.....6-30	Ow.	6-3 1/2 x 4 1/2	117	32x4	1495	1545	2295	2445	.....	Oldsmobile.....47	Ow.	8-2 1/2 x 4 1/2	115	32x4	1625	1625	2185	2425
Chalmers.....6-30	Ow.	6-3 1/2 x 4 1/2	122	33x4 1/2	.....	1795	.....	.....	.....	Overland.....4	Ow.	4-3 1/2 x 4	100	30x3 1/2	695	695	1000	1275
Champion.....Tourist	Lyc.	4-3 1/2 x 5	113	32x3 1/2	1095	.....	.....	.....	.....	Packard.....Single-Six	Ow.	6-3 1/2 x 4 1/2	116	33x4 1/2	2975	2975	3650	3975
Champion.....Special	H.S.	4-3 1/2 x 5	118	32x4	1395	1395	.....	.....	.....	Packard.....Twin-Six	Ow.	12-3 1/2 x 5	136	35x5	4850	4850	6600	6600
Chandler.....Six	Ow.	6-3 1/2 x 5	123	33x4	1785	1785	2785	2885	.....	Paige.....6-42	Ow.	6-3 1/2 x 5	119	32x4	1635	1635	2450	2570
Chevrolet.....490	Ow.	4-3 1/2 x 4	102	30x3 1/2	625	625	975	975	.....	Paige.....6-64	Ow.	6-3 1/2 x 5	131	33x4 1/2	3295	3295	3755	3830
Chevrolet.....FB	Ow.	4-3 1/2 x 4 1/2	110	33x4	975	975	1575	1575	.....	Pan American E&F 6-55	H.S.	6-3 1/2 x 5	121	33x4	2000	2000	2100	.....
Cleveland.....40	Ow.	6-3 1/2 x 5	112	32x4	1295	1295	2195	2295	.....	Parenti.....1921	Ow.	8-2 1/2 x 4 1/2	125	32x4	2000	2000	2895	3000
Climber Four.....H.S.	.....	4-3 1/2 x 5	115	33x4	1450	1385	.....	.....	.....	Patterson.....650	Cont.	6-3 1/2 x 4 1/2	120	33x4	1595	1625	2895	2895
Climber Six.....S.H.S.	.....	6-3 1/2 x 5	125 1/2	32x4 1/2	2250	2250	.....	.....	.....	Peelless.....54-5-7	Ow.	8-3 1/2 x 5	125	34x4 1/2	2850	2880	3500	3790
Cole.....870	Nort.	6-3 1/2 x 5 1/2	127	33x5	2550	2695	2795	3695	3995	Peters.....Ow.	2-3 1/2 x 3 1/2	90	28x3	385	.....	.....	.....
Columbia Challenger.....Rut.	.....	6-3 1/2 x 5	115	32x4	1195	.....	1995	1995	.....	Piedmont.....4-30	Lyc.	4-3 1/2 x 5	116	32x3 1/2	970	.....	.....	.....
Columbia.....D-C&CS	Cont.	6-3 1/2 x 4 1/2	115	32x4	1475	1475	1475	2250	.....	Piedmont.....6-40	Cont.	6-3 1/2 x 4 1/2	122	32x4	1255	1255	.....	.....
Comet.....C-53	Cont.	6-3 1/2 x 5 1/2	125	33x4 1/2	2350	2450	3650	.....	.....	Pierce-Arrow.....Ow.	6-4 1/2 x 5	138	35x5	7000	6500	8000	8500	
Commonwealth.....44	H.S.	4-3 1/2 x 5	117	32x4	1395	.....	2465	.....	.....	Pilot.....6-45	Teetor	6-3 1/2 x 5	120	32x4	1945	1895	.....	.....
Crawford.....21-40	Cont.	6-3 1/2 x 5 1/2	122 1/2	32x4	3000	3000	3000	4500	.....	Pilot.....6-50	H.S.	6-3 1/2 x 5	126	32x4 1/2	2285	2285	3350	3400
Crow-Elliott.....L-63-65	Lyc.	4-3 1/2 x 5	117	32x3 1/2	1295	1295	.....	.....	.....	Porter.....40	Ow.	4-4 1/2 x 6 1/2	142	35x5	6750	Chassis Price	.....	.....
Crow-Elliott.....S-63-65	H.S.	6-3 1/2 x 5	117	33x4	1545	1545	.....	2395	.....	Premier.....6-D	Ow.	6-3 1/2 x 5 1/2	126 1/2	33x5	3790	3690	4690	5190
Daniel.....D-19	Ow.	8-3 1/2 x 5 1/2	132	34x4 1/2	5550	5550	6250	6950	.....	Premcar.....6-40 A	Falls	6-3 1/2 x 4 1/2	117	33x4	1295	1295	.....	.....
Davis.....61-67	Cont.	6-3 1/2 x 5 1/2	120	32x4	1995	1895	2795	2795	.....	Ralph.....A-6-60	H.S.	6-3 1/2 x 5	122	32x4 1/2	2250	2250	3100	3200
Dispatch.....Wisc.	.....	4-3 1/2 x 5	120	31x4	1250	1350	1525	1575	.....	R & V Knight.....R	Ow.	4-3 1/2 x 5	116	32x4	2150	2150	2850	2950
Dixie Flyer.....H-S-70	Ow.	4-3 1/2 x 5	112	32x4	1445	1445	1945	2245	.....	R & V Knight.....C	Ow.	6-3 1/2 x 4 1/2	127	32x4 1/2	3350	3350	4000	4200
Dodge Brothers.....Ow.	.....	4-3 1/2 x 4 1/2	114	32x4	935	985	1585	1785	.....	Ree.....T-6	Ow.	6-3 1/2 x 5	120	33x4	1650	1650	2700	2750
Doris.....6-80	Ow.	6-4 1/2 x 5	132	33x5	.....	4785	4785	5890	6690	Rever.....C	Lues.	4-4 1/2 x 6	131	32x4 1/2	4850	4650	6500	6500
Dort.....17-12	D-Ly.	4-3 1/2 x 5	108	31x4	985	985	1535	1685	.....	Rever.....6-54-E	Cont.	6-3 1/2 x 5 1/2	128	32x4 1/2	2750	2650	3350	3950
Driggs.....Ow.	.....	4-2 1/2 x 4 1/2	104	30x3 1/2	1275	1275	1975	.....	.....	Rever.....4-75-E	Dues.	4-4 1/2 x 6	128	32x4 1/2	3850	3650	.....	.....
Dupont.....A	Ow.	4-3 1/2 x 5 1/2	124	32x4 1/2	3400	3400	4900	.....	.....	Rolls-Royce.....Ow.	6-4 1/2 x 4 1/2	143 1/2	33x5	U.S. Chassis Price	11750	.....	.....
Durant.....A-22	Cont.	4-3 1/2 x 5	109	31x4	890	.....	1365	1365	.....	Romer.....Cont.	6-3 1/2 x 4 1/2	120	33x4	2000	2000	2100	2450	
Eber.....K-4	Lyc.	4-3 1/2 x 5	117	33x4	1195	1195	.....	.....	.....	Saxton.....125	Ow.	4-3 1/2 x 5	112	32x4	1545	1495	2295	2295
Eber.....7-R	Cont.	6-3 1/2 x 4 1/2	117	33x4	1595	1595	2395	2495	.....	Sayers Six.....DP	Cont.	6-3 1/2 x 4 1/2	118	33x4	1945	1945	2995	2995
Egle.....K-1	Falls	6-3 1/2 x 5	118	33x4	1595	1495	1995	2395	.....	Scripps-Booth.....B-39-42	Nort.	6-2 1/2 x 4 1/2	115	32x4	1275	1295	1950	2100
Eaton.....Ow.	.....	4-3 1/2 x 5	108 1/2	32x4	1375	1375	1880	2230	.....	Scripps-Booth.....F-43-46	Cont.	6-3 1/2 x 4 1/2	115	32x4	1470	1490	2350	2375
Fergus.....S-5-21	Ow.	6-3 1/2 x 5	126	33x4 1/2	.....	Chassis Price	8500	.....	.....	Seneca.....L & O	LeR.	4-3 1/2 x 4 1/2	108	30x3 1/2	1045	1045	.....	.....
Ferris.....C-20	Cont.	6-3 1/2 x 5 1/2	130	32x4 1/2	2695	2695	3695	.....	.....	Severin.....Six	Cont.	6-3 1/2 x 5 1/2	122 1/2	33x4 1/2	1485	1485	2100	2250
Ford.....T	Ow.	4-3 1/2 x 4	100	30x3 1/2	770	770	995	760	.....	Severin.....Six	Cont.	6-3 1/2 x 5 1/2	122 1/2	33x5	2550	2550	3250	3350
Franklin.....9-B	Ow.	6-3 1/2 x 4	115	32x4	2550	2650	2850	3650	.....	Skilton.....35	Lyc.	4-3 1/2 x 5	112	32x3 1/2	995	995	.....	.....
Gardner.....G	Lyc.	4-3 1/2 x 5	112	32x3 1/2	1995														

Specifications of Current Motor Truck Models

NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive
				Front	Rear						Front	Rear						Front	Rear	
Acason	1 1/2	\$1650	3 1/2 x 5	34x5 1/2	34x5 1/2	W	Corbitt, D	1 1/2	\$2600	3 1/2 x 5	36x3 1/2	36x5	W	Gary, F	1	\$2100	3 1/2 x 5	36x3 1/2	36x4	W
Acason, R	1 1/2	2260	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Corbitt, C	1 1/2	3150	4 1/2 x 5 1/2	36x3 1/2	36x7	W	Gary, I	1 1/2	2550	4 1/2 x 5 1/2	36x3 1/2	36x5	W
Acason, RB	2 1/2	2485	4 1/2 x 5 1/2	36x3 1/2	36x6	W	Corbitt, B	2 1/2	3300	4 1/2 x 5 1/2	36x4	36x7	W	Gary, J	2 1/2	3150	4 1/2 x 5 1/2	36x4	36x7	W
Acason, H	2 1/2	3205	4 1/2 x 5 1/2	36x4	36x8	W	Corbitt, A	3 1/2	4100	4 1/2 x 5 1/2	36x5	36x10	W	Gary, K	3 1/2	4050	4 1/2 x 5 1/2	36x5	40x5d	W
Acason, L	3 1/2	4295	4 1/2 x 5 1/2	36x5	36x10	W	Corbitt, AA	5	5000	4 1/2 x 6	36x6	40x6d	W	Gary, M	5	5150	5 x 6 1/2	36x6	40x6d	W
Acason, M	5	5250	5 x 6 1/2	36x6	40x12	W	Cyclone A	1 1/2	2685	3 1/2 x 5	34x5 1/2	36x6 1/2	W	Geraix M	1 1/2	3100	4 x 5 1/2	36x3 1/2	36x7	W
Ace, C	1 1/2	2205	3 1/2 x 5 1/2	34x3 1/2	34x5	W	Dart, S	1 1/2	.....	3 1/2 x 5 1/2	34x3 1/2	34x6	W	Geraix K	2 1/2	3500	4 1/2 x 5 1/2	36x4	36x8	W
Ace, A	2 1/2	2795	4 1/2 x 5 1/2	36x4	36x7	W	Dart, M	2 1/2	.....	4 1/2 x 5 1/2	36x4	36x7	W	Giant, 15-A	1 1/2	2250	3 1/2 x 5	34x3 1/2	34x5	W
Acme, G	1 1/2	.....	3 1/2 x 5	35x5 1/2	35x5 1/2	W	Dart, W	3 1/2	.....	4 1/2 x 6	36x5	36x10	W	Giant, 16	2	3050	4 1/2 x 5 1/2	36x4	36x7	W
Acme, B	1	.....	3 1/2 x 5	34x3 1/2	34x5	W	Day-Elder, A	1	2100	3 1/2 x 5	34x3 1/2	34x4	W	Giant, 17	3 1/2	4150	4 1/2 x 5 1/2	36x5	86x5d	W
Acme, F	1 1/2	.....	3 1/2 x 5	34x3 1/2	34x5	W	Day-Elder, B	1 1/2	2300	3 1/2 x 5	34x3 1/2	34x5	W	Globe D-20	3 1/2	1495	3 1/2 x 5	33x4 1/2	33x4 1/2	B
Acme, A	2	.....	4 1/2 x 5 1/2	36x4	36x7	W	Day-Elder, D	2	2750	4 1/2 x 5 1/2	36x4	36x7	W	Globe	1	1495	3 1/2 x 5	33x5	33x5	W
Acme, AC	2 1/2	.....	4 1/2 x 5 1/2	36x4	36x7	W	Day-Elder, C	2 1/2	3025	4 1/2 x 5 1/2	36x4	36x7	W	Golden West, GH	3 1/2	5000	4 1/2 x 5 1/2	36x7	36x7	W
Acme, C	3 1/2	.....	4 1/2 x 5 1/2	36x5	40x10	W	Day-Elder, F	3 1/2	3750	4 1/2 x 5 1/2	36x5	36x5d	W	Golden West, G	3 1/2	4500	4 1/2 x 5 1/2	36x6	36x6	W
Acme, E	5	.....	4 1/2 x 6	36x6	40x12	W	Day-Elder, E	5	4250	4 1/2 x 6	36x5	40x6d	W	Golden West, H	3 1/2-4	5000	4 1/2 x 6	36x6	36x6	W
Akr's Multi-Trk 20	1	1995	4 x 5 1/2	34x5	34x5	B	Day-Elder, E	1	1700	3 1/2 x 5 1/2	35x5 1/2	35x5 1/2	W	Golden West, I	4	5500	4 1/2 x 6	36x6	36x6	W
All-Power, C	3 1/2	5800	4 1/2 x 6	36x7	36x10	W	Dearborn, E	1 1/2	2300	3 1/2 x 5 1/2	34x4	34x5	W	Golden West, K	7	6000	5 1/2 x 6	36x6	36x6	W
All-American, B-1	1 1/2	1795	3 1/2 x 5	32x4	32x4	I	Dearborn, FX	1 1/2	2180	3 1/2 x 5 1/2	34x4	34x5	W	Golden West, HA	7	6000	4 1/2 x 6	36x6	36x10	W
All-American C-1	1 1/2	2195	3 1/2 x 5	34x4	34x5	W	Dearborn, F	1 1/2	2590	3 1/2 x 5 1/2	35x5 1/2	34x7 1/2	W	Gove, A-1	2 1/2	.....	4 1/2 x 5 1/2	36x4	36x7	I
American, 25	2 1/2	3350	4 x 6	36x4	36x4d	W	Defiance, G	1	1975	3 1/2 x 5	35x5	35x5 1/2	W	Graham Bros. A	1 1/2	2495	3 1/2 x 5	35x5 1/2	36x7	W
American, 40	4	4275	4 1/2 x 6	36x5	36x5d	W	Defiance, D	1 1/2	2550	3 1/2 x 5	35x5	36x6 1/2	W	Gramm-Born, 10	1	1495	3 1/2 x 5	33x5 1/2	35x5 1/2	B
Apex, G	1 1/2	1450 1/2	3 1/2 x 5	33x5 1/2	33x5 1/2	I	Defiance, E	2	2750	3 1/2 x 5	35x5 1/2	38x7 1/2	W	Gramm-Born, 15	1 1/2	2050	3 1/2 x 5	36x3 1/2	36x5	I
Apex, D	1 1/2	1915	3 1/2 x 5 1/2	34x3 1/2	34x4	W	DeKalb, E2 1/2	2	2600	4 1/2 x 5 1/2	36x4	36x8	W	Gramm-Born, 20	2 1/2	2725	3 1/2 x 5	36x3 1/2	36x5	W
Apex, E	2 1/2	2695	4 1/2 x 5 1/2	36x4	36x7	W	DeKalb, E2	2 1/2	2250	4 1/2 x 5 1/2	34x3 1/2	36x5	W	Gramm-Born, 25	2	3175	4 1/2 x 5 1/2	36x4	36x7	W
Apex, F	3 1/2	3975	4 1/2 x 6	36x5	36x10	W	DeMartini 1 1/2	1 1/2	2600	4 1/2 x 5 1/2	34x3 1/2	34x6	W	Gramm-Born, 30	2 1/2	3575	4 1/2 x 5 1/2	36x4	36x7	W
Armstrong, 20	1	.....	3 1/2 x 5 1/2	34x3 1/2	34x5	W	DeMartini 2	2	3300	4 x 5 1/2	36x3 1/2	36x7	W	Gramm-Born, 35	3 1/2	4375	4 1/2 x 5 1/2	36x5	40x5d	W
Armstrong, HW	2 1/2	.....	4 1/2 x 5 1/2	36x4	36x7	W	DeMartini 3	3	4250	4 1/2 x 5 1/2	36x4	36x10	W	Gramm-Born, 50	5	5275	4 1/2 x 6	36x6	40x6d	W
Armstrong, KW	3 1/2	.....	4 1/2 x 5 1/2	36x5	36x5d	W	DeMartini 4	4	4800	4 1/2 x 6	36x5	36x12	W	Hahn, J4	1	.....	3 1/2 x 5	34x5	34x5	W
Atco, B	1 1/2	.....	3 1/2 x 5 1/2	34x5 1/2	36x7	W	Denby, 31	3 1/2	1625	3 1/2 x 5	35x5	35x5	B	Hahn, CD	1 1/2	.....	4 1/2 x 5 1/2	36x3 1/2	36x6	W
Atco, B1	1 1/2	.....	3 1/2 x 5 1/2	34x5 1/2	36x7	W	Denby, 33	1 1/2	2300	3 1/2 x 5	35x5 1/2	36x7 1/2	W	Hahn, EE	2 1/2	.....	4 1/2 x 5 1/2	36x4	36x8	W
Atco, A	2 1/2	.....	4 1/2 x 5 1/2	36x4	36x8	W	Denby, 34	2	2600	3 1/2 x 5	36x3 1/2	36x6	W	Hahn, F	3 1/2	.....	4 1/2 x 5 1/2	36x5	36x10	W
Atlas, M.D	1	.....	3 1/2 x 5	32x4 1/2	32x4 1/2	W	Denby, 25	3	3300	4 1/2 x 5 1/2	36x4	36x7	W	Hahn, EF	5	.....	4 1/2 x 6	36x6	40x12	W
Atterbury, 20R	1 1/2	2775	3 1/2 x 5	34x3 1/2	34x5	W	Denby, 27	4	4200	4 1/2 x 5 1/2	36x5	36x5d	W	Hal Fur, E	1	2350	4 x 5	35x5 1/2	35x5 1/2	W
Atterbury, 7CX	2 1/2	3375	4 1/2 x 5 1/2	36x4	36x4d	W	Denby, 210	5	4850	4 1/2 x 5 1/2	36x6	40x6d	W	Hal Fur, B	2 1/2	3250	4 1/2 x 5 1/2	35x5	38x7	W
Atterbury, 7D	3 1/2	4175	4 1/2 x 5 1/2	36x5	40x5d	W	Dependable, A	1 1/2	1650	3 1/2 x 5 1/2	34x5	36x6	W	Hal Fur, F	2 1/2	4250	4 1/2 x 5 1/2	36x6	40x10 1/2	W
Atterbury, 8E	5	5575	4 1/2 x 6	36x6	40x6d	W	Dependable, C	2 1/2	2350	4 1/2 x 5 1/2	34x3 1/2	34x5	W	Hal	1 1/2	3100	3 1/2 x 5	34x5 1/2	36x7	W
Autocar, 21UF	1 1/2-2	2300	4 1/2 x 5 1/2	34x4	34x5	D	Dependable, D	2 1/2	2650	4 x 5 1/2	34x5	36x6	W	Hal	2 1/2	3275	3 1/2 x 5	36x4	36x6	W
Autocar, 21UG	1 1/2-2	2400	4 1/2 x 5 1/2	34x4	34x5	D	Dependable, E	2 1/2	2950	4 1/2 x 5 1/2	36x4	36x7	W	Hal	3 1/2	4100	4 1/2 x 5 1/2	36x5	36x5d	W
Autocar, 26V	.....	4500	4 1/2 x 5 1/2	34x6	36x12	D	Dependable, G	3 1/2	3550	4 1/2 x 6	36x6	36x7	W	Hal	5	5100	4 1/2 x 5 1/2	36x5	40x6d	W
Available, H1 1/2	1 1/2	2475	4 x 5 1/2	36x3 1/2	36x5	W	Diamond-T, O	1	2500	3 1/2 x 5 1/2	34x5 1/2	36x8 1/2	W	Hal	7	5100	4 1/2 x 5 1/2	36x5	40x6d	C
Available, H2 1/2	2 1/2	2775	4 x 5 1/2	36x3 1/2	36x6	W	Diamond-T, FS	1 1/2	2960	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Harvey, WEA	1 1/2	2550	4 1/2 x 5 1/2	34x3 1/2	34x5	W
Available, H2 1/2	2 1/2	3475	4 x 5 1/2	36x4	36x8	W	Diamond-T, T	1 1/2	2650	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Harvey, WFA	2	2950	4 1/2 x 5 1/2	34x4	34x7	W
Available, H3 1/2	3 1/2	4475	4 1/2 x 5 1/2	36x5	40x5d	W	Diamond-T, U	2	3285	4 x 5 1/2	36x4	36x7	W	Harvey, WHA	3 1/2	3950	4 1/2 x 5 1/2	36x5	36x5d	W
Available, H5	5	5375	4 1/2 x 6	36x6	40x12	W	Diamond-T, V	3 1/2	4475	4 1/2 x 5 1/2	36x5	36x5d	W	Harvey, WKA	5	4500	4 1/2 x 6	36x6	40x6d	W
Available, H7	7	6000	5 x 6	36x6	40x14	B	Diamond-T, EL	5	5400	4 1/2 x 5 1/2	36x6	40x6d	W	Hawkeye, K	1 1/2	1850	3 1/2 x 5 1/2	34x3 1/2	34x5	I
Avary	1	.....	3 x 4	34x5 1/2	34x5 1/2	I	Diamond-T, S	5	6650	4 1/2 x 6	36x6	40x6d	W	Hawkeye, M	2	2650	4 1/2 x 5 1/2	36x4	36x6	I
Beck, A. Jr.	1	1950	3 1/2																	

Specifications of Current Motor Truck Models—Continued

NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive
				Front	Rear						Front	Rear						Front	Rear	
Kelly-S, K-45	4	\$4550	4 1/2 x 6 1/2	36x5	40x6d	C	Opden, E	2 1/2	\$3250	4 1/2 x 5 1/2	36x4	36x7	W	Service, 76	3 1/2	\$4485	4 1/2 x 6	36x5	36x5d	W
Kelly-S, K-50	4	4900	4 1/2 x 6 1/2	36x6	40x6d	C	Old Hickory, W	1	2175	3 1/2 x 5 1/2	36x3 1/2	36x4	W	Service, 101	1	5275	4 1/2 x 6	36x6	40x6d	W
Kelly-S, K-60	6	5100	4 1/2 x 6 1/2	36x6	40x7d	C	Old Reliable, A	1 1/2	2350	4 x 5	34x4	36x6	W	Signal, NF	1	2475	4 1/2 x 5	34x5 1/2	36x6 1/2	W
Keystone, 40	2	2450	3 1/2 x 5 1/2	34x4 1/2	36x7 1/2	I	Old Reliable, B	2 1/2	3500	4 1/2 x 6	34x4	36x4d	W	Signal, H	1 1/2	2925	4 1/2 x 5 1/2	34x4	36x6	W
Kimball, AB	2	3675	4 x 6	36x4	36x7	W	Old Reliable, C	3 1/2	4250	4 1/2 x 6	36x5	36x5d	W	Signal, J	2 1/2	3275	4 1/2 x 5 1/2	34x4	36x8	W
Kimball, AC	3	3975	4 1/2 x 6	36x4	36x8	W	Old Reliable, D	6	5250	4 1/2 x 6	36x6	40x6d	W	Signal, M	3 1/2	4275	4 1/2 x 5 1/2	36x5	40x5d	W
Kimball, AK	3	4500	4 1/2 x 6	36x4	36x10	W	Old Reliable, E	7	6000	4 1/2 x 6 1/2	36x6	40x7d	W	Signal, R	1	5300	4 1/2 x 6	36x6	40x6d	W
Kimball, AE	4	5000	4 1/2 x 6	36x5	40x12	W	Oleomobile Econ.	1	1085	3 1/2 x 5 1/2	35x5 1/2	35x5 1/2	C	Southern, 10	1	2090	3 1/2 x 5	34x3 1/2	34x4	W
Kimball, AF	4	5975	5 x 8	36x6	40x7d	W	Olympic, A	2 1/2	3500	4 1/2 x 5 1/2	36x4	36x7	W	Southern, 15	1 1/2	2590	3 1/2 x 5 1/2	36x6 1/2	36x7	W
Kissel, Express	1	1985 1/2	3 1/2 x 5 1/2	34x5 1/2	34x5 1/2	W	Onida, A-9	1 1/2	2350	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Southern, 20	2	2990	4 1/2 x 5 1/2	36x6 1/2	40x8*	W
Kissel, Utility	1 1/2	2775	3 1/2 x 5 1/2	36x5 1/2	36x5	W	Onida, B-9	1 1/2	2915	4 x 5 1/2	36x4	36x7	W	Standard, 1-K	1-1 1/2	1950	3 1/2 x 5	34x3 1/2	34x5*	W
Kissel, Freight	2 1/2	3475	4 1/2 x 5 1/2	36x4	36x7	W	Onida, C-9	2 1/2	3390	4 x 5 1/2	36x4	36x7	W	Standard, 76	2 1/2-3	3100	4 1/2 x 5 1/2	36x4*	36x7*	W
Kissel, H. D.	4	4475	4 1/2 x 5 1/2	36x5	36x5d	W	Onida, D-9	3 1/2	4345	4 1/2 x 5 1/2	36x5	36x10	W	Standard, 60	3 1/2-4	4000	4 1/2 x 5 1/2	36x5	36x10	W
Kleiber, AA	1	2600	4 1/2 x 5 1/2	34x3 1/2	34x5*	W	One da, E-9	5	5460	4 1/2 x 5 1/2	36x6	40x12	W	Standard, 5-K	5-7	5250	4 1/2 x 6	36x6	40x12	W
Kleiber, A	1 1/2	3100	4 1/2 x 5 1/2	36x3 1/2	36x6*	W	Orleans, A	1 1/2	2750	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Sterling, 1 1/2	1-2	3200	4 x 5 1/2	36x4 1/2	36x5*	W
Kleiber, BB	2	3600	4 1/2 x 5 1/2	36x5*	36x7*	W	Orleans, B	2 1/2	3250	4 1/2 x 5 1/2	36x4*	36x7*	W	Sterling, 2	2	3500	4 x 5 1/2	36x4	36x6	W
Kleiber, B	2 1/2	3950	4 1/2 x 5 1/2	36x5*	36x8*	W	Orleans, C	3 1/2	3750	4 1/2 x 5 1/2	36x4 1/2	36x8	W	Sterling, 2 1/2	2 1/2	3950	4 1/2 x 5 1/2	36x4*	36x4d*	W
Kleiber, C	3 1/2	4600	4 1/2 x 5 1/2	36x5	36x5d	W	Orleans, D	3	4250	4 1/2 x 5 1/2	36x6	40x8	W	Sterling, 3 1/2	3 1/2	4650	4 1/2 x 5 1/2	36x5*	40x8d*	W
Kleiber, D	5	5300	5 x 8 1/2	36x6	40x12	W	Oshkosh, A	2	3750	3 1/2 x 5 1/2	36x6 1/2	36x6 1/2	W	Sterling, 5-W	5	5500	5 x 8 1/2	36x6*	40x6d*	W
Koehler, D	1 1/2	1884	3 1/2 x 5 1/2	34x3 1/2	34x5	W	Oshkosh, AA	2	3850	3 1/2 x 5 1/2	36x7	36x7	W	Sterling, 5-C	5	6000	5 x 8 1/2	36x6	40x6d	C
Koehler, M	2 1/2	2875	4 x 5 1/2	36x4	36x7	W	Oshkosh, BB	2 1/2	4150	4 x 5 1/2	36x7 1/2	36x7 1/2	W	Sterling, 7 1/2	7 1/2	6500	5 x 8 1/2	36x6	40x7d	C
Koehler, MCS	2 1/2	2975	4 x 5 1/2	36x4	36x7	W	Oshkosh, BB	2 1/2	4300	4 x 5 1/2	36x7 1/2	36x7 1/2	W	Stewart, 14	1 1/2	1895	3 1/2 x 5 1/2	32x4 1/2	32x4 1/2	I
Koehler, F	3 1/2	3985	4 1/2 x 5 1/2	36x5	36x10	W	Packard, EC	...	3500	4 1/2 x 5 1/2	36x4	36x7	W	Stewart, 15	1 1/2	1875	3 1/2 x 5	35x5 1/2	35x5 1/2	I
Koehler, MT, Trac	2 1/2	2975	4 x 5 1/2	36x4	36x7	W	Packard, ED	...	4100	4 1/2 x 5 1/2	36x5	36x5d	W	Stewart, 9	1 1/2	2200	3 1/2 x 5	34x3 1/2	34x5	I
L.M.C., 2-29	2 1/2	2540	4 1/2 x 5 1/2	36x4	36x4d	I	Packard, EF	...	4500	5 x 5 1/2	36x6 1/2	40x6d	W	Stewart, 7	2	2800	4 1/2 x 5 1/2	34x4	34x7	I
Lange, B	2 1/2	3350	4 1/2 x 5 1/2	36x4*	36x6*	C	Packard, EX	...	4000	4 1/2 x 5 1/2	36x6 1/2	40x6 1/2	W	Stewart, 7-X	2 1/2	2950	4 1/2 x 5 1/2	34x4	34x7	I
Larabee, XZ	3 1/2-4	1925	3 1/2 x 5 1/2	34x5 1/2	34x5 1/2	B	Paige, 52-19	1 1/2	2840	4 x 5 1/2	34x2 1/2	34x5	W	Stewart, 10	3 1/2	3850	4 1/2 x 5 1/2	36x5	36x6d	I
Larabee, U	1 1/2	2400	3 1/2 x 5	34x3 1/2	34x5	B	Paige, 54-20	2 1/2	3400	4 1/2 x 5 1/2	34x4	34x8	W	Stewart, 10-X	3 1/2	3850	4 1/2 x 5 1/2	36x5	36x6d	I
Larabee, SK	2 1/2	3200	4 1/2 x 5 1/2	36x4	36x7	W	Paige, 51-18	3 1/2	4235	4 1/2 x 5 1/2	36x5	36x5d	W	Stearns, A	1	1995	3 1/2 x 5 1/2	34x4 1/2	35x5 1/2	W
Larabee, FL	3 1/2	4000	4 1/2 x 5 1/2	36x5	36x5d	W	Parker, F29	2	3500	4 x 6	34x4	36x4d	W	Stearns, B	1 1/2	2350	3 1/2 x 5 1/2	36x3 1/2	36x5	W
Larabee, FW	5	4800	4 1/2 x 6	36x6	40x6d	W	Parker, J28	3 1/2	4400	4 1/2 x 6	36x5	40x6d	W	Stearns, C	2	1240	3 1/2 x 5	34x4 1/2	34x4 1/2	W
Lion, L	1	2350	3 1/2 x 5 1/2	35x5 1/2	35x7 1/2	W	Parker, M20	0	5500	4 1/2 x 6	36x6	40x6d	W	Stearns, D	2	2800	4 x 5 1/2	36x4	36x7	W
Loedingham, C	1 1/2	2100	3 1/2 x 5 1/2	35x5 1/2	35x5 1/2	W	Patriot, Reverse	1 1/2	1785	3 1/2 x 5 1/2	35x5 1/2	35x5 1/2	W	Stearns, F	2	3600	4 1/2 x 5 1/2	36x5d	36x5d	W
Loedingham, W	2 1/2	2700	3 1/2 x 5 1/2	34x3 1/2	34x5*	W	Patriot, Lincoln	1 1/2	2450	4 x 5 1/2	34x3 1/2	34x5*	W	Sullivan, E	2	3350	4 1/2 x 5 1/2	36x4*	36x7*	W
Loedingham, W	2 1/2	3150	4 1/2 x 5 1/2	36x4*	36x7*	W	Patriot, Wash'n	1 1/2	3450	4 1/2 x 5 1/2	36x4*	36x7*	W	Sullivan, H	3 1/2	4650	4 1/2 x 6	36x5	36x6d	W
Maccar, L	1 1/2	2925	4 1/2 x 5 1/2	36x4	36x6	W	Piedmont, 4-30	1 1/2	1685	3 1/2 x 5	34x4 1/2	34x4 1/2	W	Superior, D	1	1650	3 1/2 x 5	34x4 1/2	34x4	I
Maccar, H-2	2 1/2	3650	4 1/2 x 5 1/2	36x4	36x4d	W	Pierce-Arrow	2	3200	4 x 5 1/2	36x4	36x4d	W	Superior, E	2	2600	4 1/2 x 5 1/2	36x4	36x6	I
Maccar, M-2	3 1/2	4500	4 1/2 x 6	36x5	36x5d	W	Pierce-Arrow	3 1/2	4350	4 1/2 x 6	36x5	36x5d	W	Super Truck, 50	2 1/2	3300	4 x 6	36x4	36x8	W
Maccar, G	5	5500	4 1/2 x 6	36x5	40x6d	W	Pierce-Arrow	6	4850	4 1/2 x 6 1/2	36x5	40x6d	W	Super Truck, 70	3 1/2	4300	4 1/2 x 6	36x5	40x6d	W
MacDonald, A	7 1/2	6750	4 1/2 x 6	40x7	40x14	I	Pioneer, 59	1	1550	3 1/2 x 5 1/2	32x4 1/2	32x4 1/2	W	Super Truck, 100	5	5300	4 1/2 x 6	36x5	40x12	W
Mac, AB D.R.	1 1/2	3450	4 x 5	36x4	36x3 1/2	D	Pittsburger, C-21	2 1/2	3500	4 1/2 x 5 1/2	36x5*	36x7*	W	Super Truck, 150	7 1/2	6300	5 x 8	36x6	40x7d	W
Mac, AB	1 1/2	3400	4 x 5	36x4	36x4d	C	Pony	0	400	2 1/2 x 5 1/2	28x3 1/2	28x3 1/2	C	Texas, A18	1 1/2	1015	3 1/2 x 5 1/2	33x4	33x4	I
Mac, AB Chain	1 1/2	3000	4 x 5	36x4	36x3 1/2	C	Pow, F	1 1/2	...	3 1/2 x 5 1/2	36x6	36x6	W	Texas, TK39	1 1/2	1550	3 1/2 x 5 1/2	36x6	36x7	W
Mac, AB Chain	2	3300	4 x 5	36x4	36x4d	C	Pow, C	1 1/2	...	4 1/2 x 5 1/2	36x6	40x10	W	Tiffin, GW	1 1/2	2400	4 1/2 x 5 1/2	36x3 1/2	36x5	I
Mac, AB D.R.	2	3750	4 x 5	36x4	36x4d	D	Premcar, B-143	1 1/2	2475	3 1/2 x 5 1/2	36x6 1/2	36x6 1/2	W	Tiffin, MW	2 1/2	3100	4 1/2 x 5 1/2	36x4	36x3 1/2	I
Mac, AC Chain	3 1/2	4950	5 x 8	36x5	40x5d	C	Rainier, R-11	1 1/2	2150	3 1/2 x 5 1/2	35x5 1/2	35x5 1/2	W	Tiffin, PW	3 1/2	4100	4 1/2 x 5 1/2	36x5	40x5d	W
Mac, AC Chain	6 1/2	5500	5 x 8	36x6	40x6d	C	Rainier, R-10	1	2350	3 1/2 x 5 1/2	34x									

Specifications of Current Motor Truck Models—Continued

NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES	Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES	Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES	Final Drive
				Front Rear						Front Rear						Front Rear	
Watson, E	1	\$1865	3 1/2 x 5 1/2	35x5 1/2 35x5 1/2	W	Wichita, S	5	\$5000	4 1/2 x 6	36x6 40x6d	W	Winther, 39	1 1/2	\$2450	3 1/2 x 5 1/2	34x3 1/2 34x5	I
Watson, N	1 1/2	4250	4 1/2 x 5 1/2	35x5 35x5 1/2	W	Wilcox, AA	1 1/2	2100	3 1/2 x 5 1/2	36x4 36x4 1/2	W	Winther, 49	2	3250	4 x 5	34x4 34x4d	I
Western, W1 1/2	1 1/2	2550	4 1/2 x 5 1/2	36x3 1/2 36x5	W	Wilcox, B	1 1/2	2775	4 1/2 x 5	36x4 36x5	W	Winther, 50	2 1/2	3905	4 x 6	38x7 42x9d	I
Western, L1 1/2	1 1/2	2550	4 1/2 x 5 1/2	36x3 1/2 36x5	W	Wilcox, D	2 1/2	3300	4 1/2 x 5	36x4 36x3 1/2d	W	Winther, 70	3 1/2	4200	4 x 6	36x5 36x5d	I
Western, W2 1/2	2 1/2	3250	4 1/2 x 5 1/2	36x4 36x7	W	Wilcox, E	3 1/2	4250	4 1/2 x 6	36x5 36x5d	W	Winther, 109	2 1/2	3690	4 x 5	34x5 36x6	I
Western, L2 1/2	2 1/2	3250	4 1/2 x 5 1/2	36x4 36x7	W	Wilcox, F	5	5200	4 1/2 x 6 1/2	36x5 40x6d	W	Winther, 450	5	5250	4 1/2 x 6	36x6 40x5d	I
Western, W3 1/2	3 1/2	4250	4 1/2 x 5 1/2	36x5 40x5d	D	Wilson, P	1 1/2	2270	3 1/2 x 5	36x3 1/2 36x5	W	Winther, 140	7	5900	5 x 6	36x6 40x7d	I
White, 15	2 1/2	2400	3 1/2 x 5 1/2	34x5 1/2 34x5 1/2	B	Wilson, EA	2 1/2	2825	4 1/2 x 5 1/2	36x4 36x7	W	Wisconsin C	1	1950	4 x 5 1/2	34x5 1/2 34x5 1/2	W
White, 20	2 1/2	3250	3 1/2 x 5 1/2	36x4 36x7	D	Wilson, G	3 1/2	3635	4 1/2 x 5 1/2	36x5 36x5d	W	Wisconsin C	1 1/2	2500	4 1/2 x 5 1/2	36x6 36x6 1/2	W
White, 45	5	4500	4 1/2 x 5 1/2	36x6 40x6d	D	Wilson, H	5	4520	4 1/2 x 6	36x6 40x6d	W	Wisconsin E	3 1/2	4000	5 x 6 1/2	36x6 36x12 1/2	W
White Hick, E	1 1/2	2450	3 1/2 x 5 1/2	34x5 1/2 34x5 1/2	D	Winther, 751	1 1/2	1795	3 1/2 x 5	34x4 1/2 35x5 1/2	I	Witt-Will, N	1 1/2	2750	3 1/2 x 5	36x3 1/2 36x5	W
White Hick, K	2 1/2	3350	4 1/2 x 5 1/2	36x4 36x5	W	Winther, 430	1 1/2	2850	3 1/2 x 5	32x4 32x4	I	Wolverine, J	2 1/2	3250	4 1/2 x 5 1/2	36x7 36x7 1/2	W
Wichita, K	1	2300	3 1/2 x 5 1/2	36x3 1/2 36x4	W	*2-cyl. 16-cyl. 18-cyl. All others, not marked, are 4-cyl. Tractor, Tractor, *Canadian made.											
Wichita, L	1 1/2	2600	3 1/2 x 5 1/2	36x3 1/2 36x5	W	Final Drive: W—Worm, I—Internal Gear, C—Chain, D—Double Reduction, B—Belt.											
Wichita, M	2	2800	3 1/2 x 5 1/2	36x3 1/2 36x6	W	Four-Wheel, B—External Gear, *Tires—optional.											
Wichita, R	2 1/2	3000	3 1/2 x 5 1/2	36x4 36x7	W	†Pneumatic Tires. All others solid. ††Price includes body.											
Wichita, RX	2 1/2	3600	4 1/2 x 6	36x4 36x8	W	‡—Price includes several items of equipment.											
Wichita, O	3 1/2	4000	4 1/2 x 6	36x5 36x5d	W							Yellow Cab M21	3 1/2	2050	3 1/2 x 5	32x4 32x4	B
												Yellow Cab M41	1 1/2	2350	3 1/2 x 5	34x4 1/2 34x4 1/2	W

Farm Tractor Specifications and Prices

TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Flow Capacity	TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Flow Capacity	TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Flow Capacity
Albion One...	16-30	\$1975	3	Clim.	4-5 x 6 1/2	GDK	3-4	Gray... 1920	18-36	\$2000	3	Wauk	4-4 1/2 x 6 1/2	Gas.	4	Port Huron... A	12-25	\$1700	4	Chief	4-4 1/2 x 6	G.K.	3
Albion Chalm. B	6-12	925	2	LeR.	4-3 1/2 x 4 1/2	Gas.	1	Ground Hog...	19-31	2300	4	Erd.	4-4 x 6	GorK	3	Prairie Dog... L	9-18	650	3	Wauk	4-3 1/2 x 5 1/2	Gas.	2
Albion Chalm. G.P.	6-12	850	2	LeR.	4-3 1/2 x 4 1/2	Gas.	1-2	Gt. Western St...	20-30	1950	4	Beav.	4-4 1/2 x 6	K.	4	Prairie Dog... D	15-30	1250	4	Wauk	4-4 1/2 x 6 1/2	Gas.	3
Albion Chalm. T...	12-20	1495	2	Mid. W.	4-4 1/2 x 5 1/2	Gas.	2-3	Hart-Parr... 20	20	995	4	Own	2-5 1/2 x 6 1/2	K.D.	2	Ranger Cul...	8-10	...	4	LeR.	4-3 1/2 x 4 1/2	Gas.	1
Albion Chalm. T...	10-18	875	2	Own	4-4 1/2 x 5 1/2	G.K.	3-4	Hart-Parr... 30	30	1955	4	Own	2-6 1/2 x 7	K.D.	3	Reed... A-1	15-30	1985	4	Wauk	4-4 1/2 x 6 1/2	GorK	3-4
Albion Chalm. T...	18-20	2150	2	Own	4-4 1/2 x 6 1/2	GorK	3	Heider... D	9-16	1170	4	Wauk	4-4 1/2 x 5 1/2	G.K.	2	Reed... A-1	18-36	2185	4	Wauk	4-5 x 6 1/2	Gas.	4
Albion Chalm. T...	10-18	875	2	Own	4-4 1/2 x 5 1/2	G.K.	3	Heider... C	12-20	1395	4	Wauk	4-4 1/2 x 6 1/2	G.K.	3	Reliable...	10-20	985	4	Own	2-6 x 7	Ker.	2
Albion Chalm. T...	14-28	1675	4	Own	4-5 x 6	GorK	3	Heider... Cult	6-10	1050	4	LeR.	4-3 1/2 x 4 1/2	Gas.	1	Rex...	12-25	1600	4	Wauk	4-4 1/2 x 5 1/2	GorK	3
Albion Chalm. T...	14-28	1675	4	Own	4-5 x 6	GorK	3	Hicks...	20-30	...	4	LeR.	4-4 1/2 x 6	GorK	4	Russell...	12-24	1500	4	Own	4-4 1/2 x 5 1/2	GorK	2-3
Andrews Kin. D.	18-36	2500	4	Clim.	4-4 1/2 x 6 1/2	G.K.	2-3	Huber Light 4	12-25	1185	4	Wauk	4-4 1/2 x 5 1/2	GorK	3	Russell...	15-30	2200	4	Own	4-5 x 6 1/2	GorK	3-4
Appleton...	12-20	1500	4	Buda	4-4 1/2 x 5 1/2	G.K.	4	Huber Super 4	15-30	1885	4	Mid. W.	4-4 1/2 x 6	Gas.	3	Russell...	20-35	3000	4	Own	4-5 1/2 x 7	GorK	4-5
Are... 1921	3-5	550	4	Clim.	4-5 x 6 1/2	Gas.	1	Illinois Super...	18-36	2375	4	Clim.	4-5 x 6 1/2	G.K.	4	Samson... M	10-20	1250	4	Nor	4-4 x 5 1/2	G.K.	2
Aultman-T...	15-30	2200	4	Clim.	4-5 x 6 1/2	Gas.	2-3	Imperial... C	40-70	5000	4	Own	4-7 1/2 x 9	G.K.D.	10	Sandusky... J	10-20	1250	4	Own	4-4 1/2 x 5 1/2	G.K.D.	2
Aultman-T...	22-45	3580	4	Own	4-5 x 6 1/2	G.K.	4	Indiana... F	5-10	895	2	LeR.	4-3 1/2 x 4 1/2	Gas.	1-2	Sandusky... J	15-35	1750	4	Own	4-5 x 6 1/2	G.K.D.	4
Aultman-T...	30-60	5000	4	Own	4-5 x 6 1/2	G.K.D.	6	International...	8-18	900	4	Own	4-4 1/2 x 5	G.K.D.	2	Shawnee Com.	6-12	...	2	LeL.	4-3 1/2 x 4 1/2	Gas.	10
Automot. B-3...	12-24	1785	4	Own	4-5 x 6 1/2	Gas.	2-3	International...	15-30	1750	4	Own	4-5 1/2 x 6	G.K.D.	3-4	Shawnee Com.	9-18	...	2	Gray	4-3 1/2 x 5	G.K.	3
Avery SR. Cult-C	5-10	...	4	Own	4-4 x 5 1/2	Gas.	2-3	J-T... N	20-40	3485	2	Chief	4-4 1/2 x 6	G.K.D.	3-4	Shelby... D	15-30	...	4	Beav.	4-4 1/2 x 6	G.K.	3
Avery Cult-C	5-10	...	4	Own	4-4 x 5 1/2	Gas.	2-3	Klumb... F	16-32	1650	4	Clim.	4-5 x 6 1/2	Gas.	4-6	Shelby... C	10-20	...	4	Erd.	4-4 x 6	GorK	2-3
Avery C	8-16	...	4	Own	4-4 x 5 1/2	G.K.D.	2-3	Knudsen, 1920	25-45	2500	4	Own	4-5 x 9	Gas.	4-6	Short Turn...	20-40	1500	3	Beav.	4-4 1/2 x 6	G.K.	3
Avery	12-20	...	4	Own	4-4 x 5 1/2	G.K.D.	2-3	LaCrosse... M	6-12	650	4	Own	2-4 x 6	G.K.	1	Square T...	18-35	2075	3	Clim.	4-5 x 6 1/2	G.K.	3
Avery	12-25	...	4	Own	4-4 x 5 1/2	G.K.D.	2-3	LaCrosse... G	12-24	985	4	Own	2-6 x 7	GorK	3	Steady Pull...	12-24	1485	4	Beav.	4-4 x 5	Gas.	3
Avery	14-28	...	4	Own	4-4 x 5 1/2	G.K.D.	4-5	Lauson...	12-25	1495	4	Mid. W.	4-4 1/2 x 7	Gas.	3	Stinson... 4E	18-36	1835	4	Beav.	4-4 1/2 x 6	G.K.	4
Avery	18-36	...	4	Own	4-4 x 5 1/2	G.K.D.	5-6	Lauson...	15-25	1685	4	Beav.	4-4 1/2 x 6	GorK	3-4	Stone...	20-40	2250	4	Beav.	4-4 1/2 x 6	G.K.	4
Avery	25-60	...	4	Own	4-4 x 5 1/2	G.K.D.	8-10	Lauson...	15-25	1885	4	Beav.	4-4 1/2 x 6	GorK	3-4	Toga...	15-27	2625	4	Winc.	4-4 1/2 x 6	Gas.	3-4
Bates	15-25	...	4	Own	4-4 x 5 1/2	Gas.	3	Leader... B	12-18	1095	4	Own	2-6 x 6 1/2	G.K.D.	2-3	Titan...	10-20	900	4	Own	2-6 1/2 x 8	G.K.D.	3
Bates Mule F	15-25	...	4	Mid. W.	4-4 x 5 1/2	Gas.	3	Leader... GU	18-35	2775	4	Clim.	4-5 x 6 1/2	G.K.	3-4	Topp... B	30-45	3500	4	Wauk	4-4 1/2 x 6 1/2	Gas.	3-4
Bates Mule G	25-35	...	4	Own	4-4 x 5 1/2	G.K.	2-3	Leader... E	18-35	2775	4	Clim.	4-5 x 6 1/2	G.K.	3-4	Toro Cultivator	6-10	...	3	LeL.	4-3 1/2 x 4 1/2	Gas.	2
Beau...	8-16	...	4	Own	4-4 x 5 1/2	G.K.D.	2-3	Leonard... E	20-30	2530	4	Buda	4-4 1/2 x 6	G.K.	3	Townsend...	10-20	895	2	Own	4-3 1/2 x 7	Ker.	2-3
Beau...	30	...	4	Own	4-4 x 5 1/2	G.K.D.	8-9	Liberty... E	18-32	2475	4	Clim.	4-5 x 6 1/2	Gas.	4	Townsend...	15-30	1485	2	Own	4-7 x 8	Ker.	3-4
Beau...	60	...	4	Own	4-4 x 5 1/2	G.K.D.	8-9	Linn... H4J	40	4500	4	Cont.	4-4 1/2 x 6 1/2	Gas.	6	Towns end...	25-50	2750	2	Own	4-8 1/2 x 10	Ker.	4-8
Boring... 1921	15-30	1850	3	Wauk	4-4 1/2 x 7	GorK	3-4	Linn... W	60	5100	4	Wauk	4-5 x 6 1/2	Gas.	6	Traction Motor	40-60	...	4	LeL.	4-8 1/2 x 10	Gas.	4-5
Born-On 1921	15-30	1650	4	Own	4-4 1/2 x 7	GorK	3-4	Little Giant... B	16-22	2200	4	Own	4-4 1/2 x 6	K.	4	Triumph... H	18-36	2450	2	Erd.	4-4 1/2 x 6	Ker.	4
Capital...	15-30	1000	2	Own	4-4 x 6	Gas.	3	Little Giant... A	26-35	3300	4	Own	4-5 1/2 x 6	K.	6	Trumdar... 10	25-40	3750	2	Wauk	4-5 x 6 1/2	GorK	4
Case...	10-18	1090	4	Own	4-4 x 6	GorK	2	Lombard...	85-150	...	2	...	4-5 1/2 x 6 1/2	Gas.	10	Turner... 1921	14-25	1295	4	Buda	4-4 1/2 x 5 1/2	G.K.	3
Case...	15-27	1680	4	Own	4-4 x 6	GorK	2	Lombard...	50	...	2	...	4-5 1/2 x 6 1/2	Gas.	6-10	Twin City...	12-20	1580	4	Own	4-4 1/2 x 6	G.K.	3
Case...	22-40	3100	4	Own	4-4 x 6 1/2	GorK	4-5	Lombard...	50	...	2	...	4-5 1/2 x 6 1/2	Gas.	6-10	Twin City...	20-35	3175	4	Own	4-4 1/2 x 6 1/2	G.K.	3
Caterpillar T11	25	4250	2	Own	4-4 x 6 1/2	GorK	4-5	Magnet... B	14-28	1875	4	Wauk	4-4 1/2 x 6 1/2	K&G	3	Uncle Sam C29	12-20	1385	4	Weld.	4-4 x 5 1/2	G	2-3
Caterpillar T16	40	6500	2	Own	4-4 x 6 1/2	GorK	4-5	Master Jr. 1921	8-10	585	2	LeR.	4-3 1/2 x 4 1/2	Gas.	1	Uncle Sam B19	20-30	2300	4	Beav.	4-4 1/2 x 6	GorK	3-4
Centaur	5-2 1/2	455	2	N Way	2-4 1/2 x 5 1/2	GorK	1-9	Merry Gar 1921	2	230	2	Ervin	1-2 1/2 x 2 1/2	Gas.	3	Uncle Sam D21	20-30	1985	4	Beav.	4-4 1/2 x 6	GorK	3-4
Chase	12-25	1725	3	Buda	4-4 1/2 x 5 1/2	GorK	2-3	Minne... AL-P	12-25	1230	4	Own	4-4 1/2 x 7	GorK	3-4	Universal...	1-4	475	2	Own	1-2 1/2 x 5	G	1
Chicago 40	40	2500	4	Own	4-4 x 6	G.K.D.	2-3	Minne. Gen-P	17-30	1850	4	Own	4-4 1/2 x 7	GorK	3-4	Utiliter... 501	2 1/2	380	4	Own	1-3 1/2 x 4 1/2	G	5-6
Cletrac... F	9-16	845	2	Own	4-3 1/2 x 4 1/2	G.K.D.	2-3	Mod. Duty	22-44	3300	4	Own	4-6 x 7	GorK	5-6	Valle... B&W	12-24	1750	4	Own	4-4 1/2 x 5 1/2	G.K.D.	3
Cletrac... W	12-20	1495	2	Own	4-4 x 5 1/2	G.K.D.	2-3	Minne...	...	...	4	Own	4-7 1/2 x 9	GorK	8-9	Victory... 1921	9-18	1350	4	Gray	4-3 1/2 x 5	Gas.	2
Dakota...	15-27	1750	3	Dom.	4-8 x 6	Gas.	3	Heavy Duty	35-70	4800	4	Own	4-7 1/2 x 9	GorK	8-9	Victory... 1921	9-18	1350	4	Wauk	4-4 1/2 x 5 1/2	Gas.	2
Dart... B.J.	15-30	2100	4	Buda	4-4 x 6	Gas.	3-4	Mohawk 1921	8-16	785	2	Light	4-3 1/2 x 4 1/2	GorK	2-3	Via... B	15-30	1650	4	Wauk	4-4 1/2 x 5 1/2	G.K.	3
Dodge...	20-30	2500	4	Buda	4-4 x 6	Gas.	3-4	Medine Univ D	9-18	980	2	Own	4-3 1/2 x 5	Gas.	2	Wallis... K	15-25	1600	4	Own	4-4 1/2 x 5 1/2	G.K.	3
Dill...	20	2480	4	Cont.	4-4 x 5 1/2	Gas.	3	Medine Orch.	9-18	1075	2	Own	4-3 1/2 x 5	Gas.	2	Waterloo... N	12-25	1450	4	Own	4-4 1/2 x 5 1/2	G.K.	3
Dix... R.W.	20	2980	4	Mid. W.	4-4 x 5 1/2	Gas.	3	Motor Manuf.	1 1/2	195	2	Own	1-2 1/2 x 2 1/2	Gas.	3	Webfoot... S3	28-53	5000	4	Wise	4-5 1/2 x 7	C.D	6
Do-B-All...	-7	595	1	Own	1-4 1/2 x 5 1/2	Gas.	3	Motoc...	15-30	2250	4	Buda	4-4 1/2 x 6	Gas.	3-4	Wellington... B	16-30	1400	4	Chief	4-4 x 6	Ker.	2-3
Eagle...	12-22	1100	4	Own	2-7 x 8	GorK	3-4	NE...	3-6	425	4	Own	2-3 1/2 x 4	Gas.	3	Wellington... F	16-30	2100	4	Clim.	4-4 x 5 1/2	Gas.	4
Eagle...	16-30	1850	4	Own	2-8 x 8	GorK	4-5	NB...	3-6	425	4	Own	2-3 1/2 x 4	Gas.	3	Western... 1920	16-32	1400	4	Clim.	4-4 x 5 1/2	Gas.	4
Eagle... AA	16-30	1445	4	Own	4-4 x 15	G.K.D.	3	Nichols Shop...	20-42	3100	4	Own	2-3 1/2 x 4	Gas.	3	Whartone... E	12-25	1650	4	Wauk	4-4 x 5 1/2	G.K.	3
E-B...	12-20	925	4	Own	4-4 x 15	G.K.D.	3	Nichols Shop...	25-50	3460	4	Own	2-3 1/2 x 4	Gas.	3	Whitney... T	9-18	...	4	Own	2-5 1/2 x 6 1/2	Gas.	2
E-B...	16-32	2000	4	Own	4-4 x 15	G.K.D.	3	Nichols Shop...	25-50	3460	4	Own	2-3 1/2 x 4	Gas.	3	Whitney... T	9-18	...	4	Own	2-5 1/2 x 6 1/2	Gas.	2
Evans...	18-30	2000	4	Buda	4-4 x 15	G.K.	3	Nichols Shop...	25-50	3460	4	Own	2-3 1/2 x 4	Gas.	3	Whitney... T	9-18	...	4	Own	2-5 1/2 x 6 1/2	Gas.	2
Pageol... D	9-12	1525	4	Lye.	4-3 1/2 x 5	G.K.	2	Nichols Shop...	25-50	3460	4	Own	2-3 1/2 x 4	Gas.	3	Whitney... T	9-18	...	4	Own	2-5 1/2 x 6 1/2	Gas.	2
Farm Horse. B	18-30	1885	4	Clim.	4-5 x 6 1/2	G.K.	3-4	Nichols Shop...	25-50	3460	4	Own	2-3 1/2 x 4	Gas.	3	Whitney... T	9-18	...	4	Own	2-5 1/2 x 6 1/2	Gas.	2
Farghar...	15-25	...	4	Buda	4-4 x 6	G.K.D.	3-4	Nichols Shop...	25-50	3460	4	Own	2-3 1/2 x 4	Gas.	3	Whitney... T	9-18	...	4	Own	2-5 1/2 x 6 1/2	Gas.	2
Farghar...	18-35	...	4	Buda	4-4 x 6	G.K.D.	3-4	Nichols Shop...	25-50	3460	4	Own	2-3 1/2 x 4	Gas.	3	Whitney... T	9-18	...	4	Own	2-5 1/2 x 6 1/2	Gas.	2
Farghar...	25-60																						

MOTOR WORLD

for
DEALERS, JOBBERS AND GARAGEMEN

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No. 11

Gangway!



Automobile Prices Are Upset But Business Conditions Are Improving

LET'S GET FALL

THE news of the day tells us of price reductions in many makes of automobiles—the hoped-for stabilization which was expected to stimulate sales is again postponed.

Observations of business men in all parts of the country and official reports of the Federal Trade Commission tell us of generally improving business conditions, which mean strengthened buying power.

Which piece of news is going to guide the plans and activities of the men in the automotive trade as summer ends and the fall season begins?

Is the trade going to say that the price changes have upset everything, that merchants should not waste time and money trying to sell?

Or is the trade going to declare, "*We must sell,*" and go right ahead and sell, *in spite of price fluctuations*, as it went right ahead and did business in the months before the armistice, far more difficult than the present period.

There are people, of course, who will refuse to buy automobiles this fall because of suspicion that prices are going still lower. But there are more people who want automobiles this fall whose increased incomes or brighter business prospects are stimulating their wants and who are going to satisfy their wants, not next spring or next summer or next fall, but now, when their wants are urgent.

The automotive trade is going to sell automobiles to these people this fall. And to others who have wants of other kinds, yet equally urgent, the trade is going to sell trucks and tractors and automotive equipment and tires.

No dealer or garageman can crawl into a shell because the price reduction epidemic has made the sky look dark for the moment. He is going to realize that if he can't sell as many cars as he wants to he can sell some; that when he can't sell cars he can sell service; that when he can't sell cars or service he can sell car equipment, including accessories and tires. And the truck and tractor merchant's position, with necessary variations, is similar.

NO one can foretell exactly when business will reach a basis which may be correctly described as good. But that it is approaching this stage is clear. Automotive business men who want to be in position to share in the profits of the good business period must fight their way through the not-so-good period, which is the immediate job of every merchant in the field.

There is abundant evidence that the unfavorable influence of price uncertainty will be offset by the more vigorous buying power of the public. The volume of freight moved over the railroads is increasing every week. Retail sales in general lines are on the gain. Crops are good and the farmers and men who serve farmers have money in their pockets. There is improvement even in some branches of foreign trade, failure of which has been a leading factor in forcing curtailment of manufacturing.

In the automobile business itself we find shipments of cars from the factories were 2 per cent greater in August than in July, while the August record was 72 per cent of a year ago. In the tire industry there is a steadily increasing volume of manufacture and a corresponding decline of stocks on hand—a decidedly healthy combination.

SUMMING up the general situation, including the automotive and other businesses, can there be any disagreement over the possibilities of reward for aggressive selling effort in the automotive trade this fall?

And what must the dealer do to share in this?

1—*He must make sure that his business is on an economical operating basis, so that there will be no waste in his selling effort.*

2—*He must present to the public a front of cheerfulness, confidence in the future and ability to meet the demands of the present.*

3—*He must systematically analyze and canvass the business possibilities of his territory.*

Fulfilling condition No. 1 demands that the dealer know his business, know his costs, know his profits per item of sale or service. Study of his business, with the aid of proper accounting information, will accomplish this.

Fulfilling condition No. 2 demands that the dealer's person and those of his employees, his place of business and his advertising radiate cheerfulness, confidence and readiness to do the things the public needs.

You've been in stores where you felt that as soon as you opened the front door you stepped right into the back yard. There was stock in these stores and sales people to wait on customers, but there was no character in the arrangement of the stock, no personality in the men and women hired to sell it.

Dealers who are going to sell in the type of market now prevailing and likely to prevail for some time must put into themselves, their stores, their stocks

BUSINESS GOING

and their advertising that quality which will say to the prospective buyer, "Business is good; what can we do for you?"

Fulfilling condition No. 3 demands that the dealer make the fullest possible use of all available information regarding his territory—such as prospect lists—and that he put all possible energy and thoroughness into canvassing his territory.

WHAT can the car dealer do?

He can put special effort on enclosed cars, profiting by the larger commission per unit and by the chance to sell enclosed cars for all-winter or at least late fall and early spring use, when approaching winter restricts open-car sales.

He can watch the changing business conditions of his territory so as to concentrate selling effort on prospects whose businesses are on the upward trend.

He can go out and sell repair work for present and winter performance. He will find encouragement for special effort along this line in the records of a storage battery manufacturer who is doing less business this year than last in new batteries sold to car manufacturers, slightly less business in new batteries sold for replacement purposes, *but far more business in replacement parts for batteries*. People haven't stopped driving cars—everybody knows that, and the experience of the battery manufacturer is just another proof of it. And his experience is duplicated by that of many equipment and parts manufacturers. Cars are being kept in service; they require repairs and there is profit in repairs properly directed.

He can sell automotive equipment. Hundreds of car dealers are doing it profitably. Many others should carry accessories, and there is no better time to start than now, when extra sources of revenue are the need of every business man.

WHAT can the truck dealer do?

He can watch for every indication of improving conditions in any line of business—so as to sell trucks in that business. He can work as he has never worked before among the "little fellows"—small manufacturers and merchants, commercial haulers, truck drivers who might become commercial haulers—while many of the big fellows are not buying trucks.

He can sell service of the kind that keeps trucks on the road instead of in the repairshop, and he can check up the owner list of the make of truck he represents to make sure service work that ought to come to him is not going astray in miscellaneous channels.

He can sell truck equipment—winter cabs and the various articles that improve truck service.

WHAT can the tractor man do?

He can make the most of the fact that the general run of farmers will have more money available for investment purposes this fall than they have had for upward of a year and a half. Crops in most territories are good, and purchases of farm equipment have been so light that in many cases the farmer has reached the point where he must have tools, including tractors, to carry on his fall and winter work.

He can sell repair work, also, to put the farmer's tractor in shape for fall and winter operations, and he can sell equipment to improve tractor operation.

WHAT can the accessory and tire dealer do?

He can give his store and his advertising brightness to attract trade, he can advertise and canvass to find buyers for fall touring equipment, he can sell seasonal articles to improve car operation or enhance fall and winter motoring comfort. He can make his store the alert, ready center of supply of the accessory needs of his community.

NO one will deny that selling in the automotive field would have been easier this fall, certainly for a few weeks, if the current price revisions had not been made. But would they have been as easy, even with stabilized prices, if the trend of general business had been downward instead of upward?

The automotive trade has the advantage of sales momentum—the automobile and kindred products, which all men and women want, have been running far ahead of many other commodities in comparison with previous years' turnovers.

And, further, is the automotive trade looking for something easy? It has fought its way forward against prejudice, unfair legislation and many other varieties of opposition. It has become great because of the adaptability of its products to public desire and the public pocketbook and because of salesmanship.

It is salesmanship which will carry the trade through the fall and winter.

We can't ignore the price situation, but we don't have to fall down before it.

Manufacturer and merchant, let's get the price question settled as soon as we can. Let's not permit it to become the issue of fall business.

Price changes or no price changes, let's sell!

Making the Used Car a Real New Car Sales Stimulant

This Is a Remarkable Story of How a Detroit Dealer Is Finding New Car Prospects and Selling Through a Strong Used Car Merchandising Plan .

THERE'S a dealer in Detroit whose used car department is averaging 165 sales a month right now and the business is on the up-grade. He is Thomas J. Doyle, Dodge Bros. dealer.

The story of Doyle's marked success is a recitation of a soundly laid and gradually developing used car sales policy that has put the product on the same plane with new cars,

has recognized the used car as an important factor in new car merchandising and a product that is constantly in demand and can be sold at a profit if properly merchandized. As far back as two years ago Doyle's used car selling plan attracted attention and was described in Motor World, but since then many interesting developments have taken place, some of which will be told in the following paragraphs:

DOYLE has faced the used car situation with the firm conviction that new car business is largely dependent upon used car sales. He believes that the two must go hand in hand, and that if the success of his new car department does depend in a great measure on taking in used cars, it behooves him to make the used car sales wing of his business a *real* help to the new car wing.

With this in view Doyle has built up a used car business that virtually is a used car department store. In it may be found cars of different makes at different prices, but all good cars, and *each one carrying the guarantee of the dealer.*

Doyle's used car selling slogan is "A used car is only as good as the firm you do business with." And Doyle stands ready to have his business judged by his used car sales just as much as it is by his new car sales. He aims to build confidence in his used cars—to make a Doyle used car an advertisement and an assurance of quality and satisfaction.

So when a used car has been taken in and made to look and perform like new it goes on the used car salesroom floor with a permanent metal name plate riveted on the running board and a conspicuous card on the radiator. Both bear the name, "Thomas J. Doyle," and the words, "Used Cars," the latter arranged in a circular trademark design. The trade-mark is used in advertisements of all kinds and is printed on the salesroom walls, the purpose being to standardize it and make it synonymous with used cars of quality. On the back of the card, which is attached to the radiator, is

the slogan, "A used car is only as good as the firm you do business with," and the notice, "Look for the name-plate."

Doyle's used car department is entirely separate from the new car department. It has a separate salesroom, a separate manager, and a separate force of salesmen. One of the

How Doyle Sells Used Cars In Detroit

HERE is a dealer whose used car business is actually making new car sales.

Doyle, the subject of this story, CAN sell used cars because he has built a reputation for his traded-in cars and has won public confidence in them.

Doyle sells his determination to stand behind his used cars by attaching permanently to each a brass nameplate bearing his name and his used car trade mark.

You will want to read how Doyle makes his used car department, which is separate from his new car business, **ACTUALLY** stimulate new car sales.

watchwords of the used car salesroom is, "Keep the salesroom cleaner and more attractive than the new car department."

The same guarantee given on new cars is extended on the used cars. Doyle strives to keep 100 used cars in good condition on the salesroom floor, and when he has insufficient stock to meet the demand, Doyle *buys* them for cash. He sells on terms, usually one-third down and the balance in eight to ten months. They bend every effort toward making the prospect feel that it is a privilege to

own such a car. They are cautioned against exaggerating, though, and any claims they make must be substantiated or the purchaser's money refunded. Prices are no higher than are charged by other dealers in Detroit and elsewhere, but the prestige of the "Doyle Used Cars" is emphasized at all times and in every possible way.

Doyle knows from long experience that it pays to advertise, and he advertises. In addition to using large newspaper space, he operates 150 used car bulletins along the principal roads within a radius of fifty miles of Detroit and does some direct mail advertising, though little of the latter in the used car department.

How Used Cars Sell and Are Sold

The discussion has been limited, so far, to Doyle's used car department because this phase of his business is so important in its relation to the entire system. He is selling an average of 165 used cars each month, and 80 per cent of these are *trade-ins*. This means that Doyle is selling many new cars by persuading owners to trade in their old ones. And that is exactly what he is doing. He isn't neglecting other sources of business, of course, but this is by no means the least fertile field of new business.

For example, he is sending out more than 1,000 letters a day in a direct-mail campaign, and a very large proportion of these are going to prospects who already own cars. His point is that these owners should trade in their old cars for new ones. In all his advertising of new cars, he emphasizes the re-sale value of his make. Salesmen talk the re-sale value of this

make. In other words, Doyle is continually building business by working both ends, the new and the used.

Mailing lists of small car owners are circularized systematically, the key to the system being the used car market. Just at present, for example, Fords, Buicks, and Dodges are going well in the used car department. Result—Doyle is circularizing owners of these cars, inviting them to turn in their old ones for new Dodges. If Overlands, Maxwells, or others were going better than the ones mentioned, he would circularize them. Makes that are not so popular in the used car market are neglected until there is a better demand for them, then Doyle goes after owners of these.

In much the same way, commercial car owners whose business demands delivery cars of the Dodge size are solicited, only the season is given more consideration. Such business is sought at the time when the prospects' business is at its best, or just before. Bottlers are on the list for March, for instance, because their heavy season is just opening and they will be in need of and will be in a position to buy new cars. The laundries are circularized in June, the florists in October, and so on, depending upon the seasonableness of the prospects' business.

A mailing list of some 10,000 names is compiled from the classified section of the telephone directory for the commercial car trade. This requires a tremendous amount of work, but Doyle is of the opinion that it is the only sure method. The directory is revised quarterly, while a city directory is revised annually only and is therefore not up to date at all times.

These commercial prospects already own cars, but, as Doyle points out, few if any of them bought all their cars at one time. Some of their cars will, therefore, be wearing out and they will have to replace them. Where will they get their new cars? Quite likely they will get them where they can get a good trade for their used ones.

Passenger car lists, containing some 20,000 names of small car owners, are also circularized frequently. As already explained, this list is worked closely with the used car department. Lists show the type of car the prospect owns, as well as the make, so that in case the used car department is in need of touring cars or roadsters or coupes, owners of such models are solicited.

In addition to these mailing lists, Doyle keeps constantly in touch with his owners. A few days after the purchaser of a new car gets his machine, he receives a letter from Doyle in which he is given several pointers about the care of the car, and from that time on he gets mail from Doyle regularly. It may be a little booklet at one time, or some hint about caring for the machine during the approaching season, or about some new feature of the latest model Dodge, but at all times Doyle is keeping in touch with his owners and he doesn't neglect the opportunity to remind them of the fact that he is still in business and that the business of their friends and acquaintances would be appreciated. Then, after they have had their cars for some

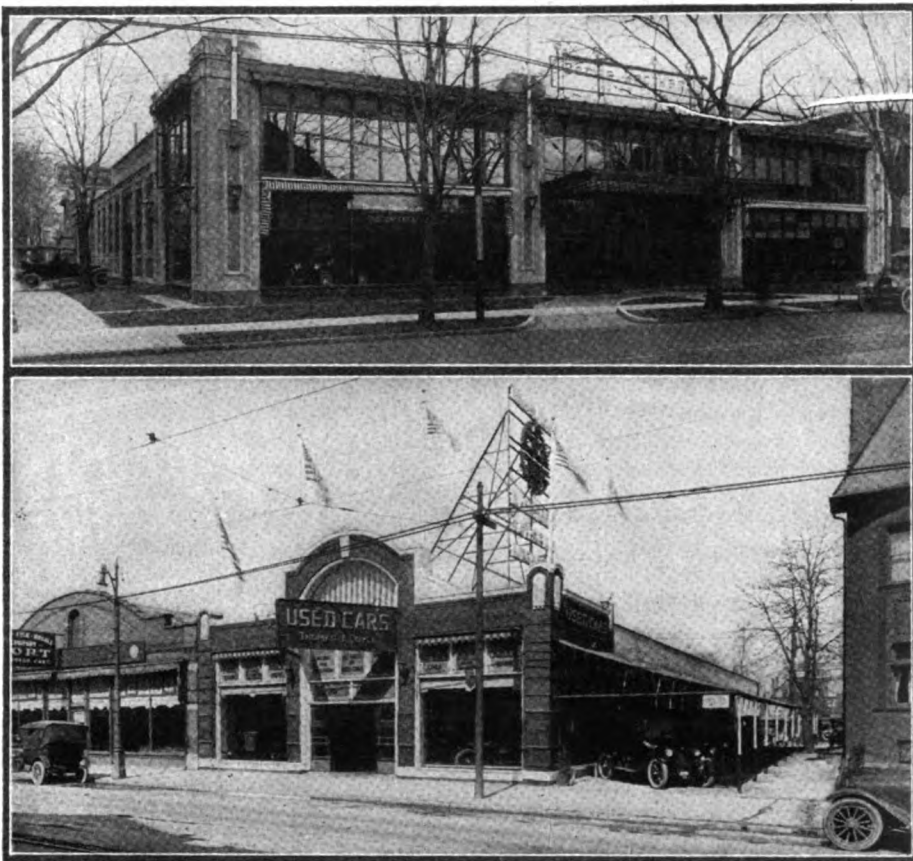
time, he begins suggesting that they trade them in and get new ones, and so it goes. He does not give owners a bonus for sending in prospects, being of the opinion that such a practice is likely to lead to misunderstandings and consequent ill feeling.

Each owner receives a booklet describing Doyle's service system. There is no such thing as free service in the Doyle shops, but all parts and repairs are standardized as to price. An inspector

distance of a quarter-mile or more between them. The signs also differ in color.

In the sales organization, Doyle has perfected certain features that are bound to get the business. "There are five things that an automobile dealer must know about his business," says Doyle, "First, he must know whether his organization is *working*, whether the salesmen are getting actual interviews. Someone once worked out a proof of the fact that

New and Used Cars in Separate Salesrooms



Although Thomas J. Doyle, Dodge Brothers dealer in Detroit, has succeeded in making his used car department a strong selling stimulant for the new car department, they are in separate buildings in different parts of the city

meets each car at the door of the service station, learns what repairs and what parts are needed, then has the owner sign for a certain amount of labor and materials for a certain fee. In this way all are charged alike and there is never any question about the cost. Following each repair job, a letter is sent out asking whether everything was satisfactory and asking the owner to reply in case it was not.

Selling the Cars

In addition to sending out more than 1000 letters each day in a direct mail campaign for new car sales, Doyle advertises heavily in the newspapers and on billboards. Some 150 roadside bulletins advertising the new cars are maintained along the principal thoroughfares, and 105 large billboards are used in the city of Detroit. The roadside bulletins are separated from the same advertisements of used cars, there usually being a

if a salesman makes enough calls he is bound to get business. They can't get business if they don't go after it, and it is the dealer's place to know whether they are going after it.

"The second thing the dealer must know is, how many prospects salesmen are getting. From this information he can check up on the kind of territory he has, how his salesmen are going after their interviews, and how his advertising is pulling. If salesmen are not getting as many prospects as they should from a certain number of interviews, something is wrong and the dealer had better go to work to determine just what it is.

"The third question is, how many killed prospects? That is, are his salesmen hanging on and wasting time with a dead prospect? When one learns that it is useless to urge a prospect further, he should kill him, figuratively, of course, and go on after another. On the other hand, he should not be too quick to give

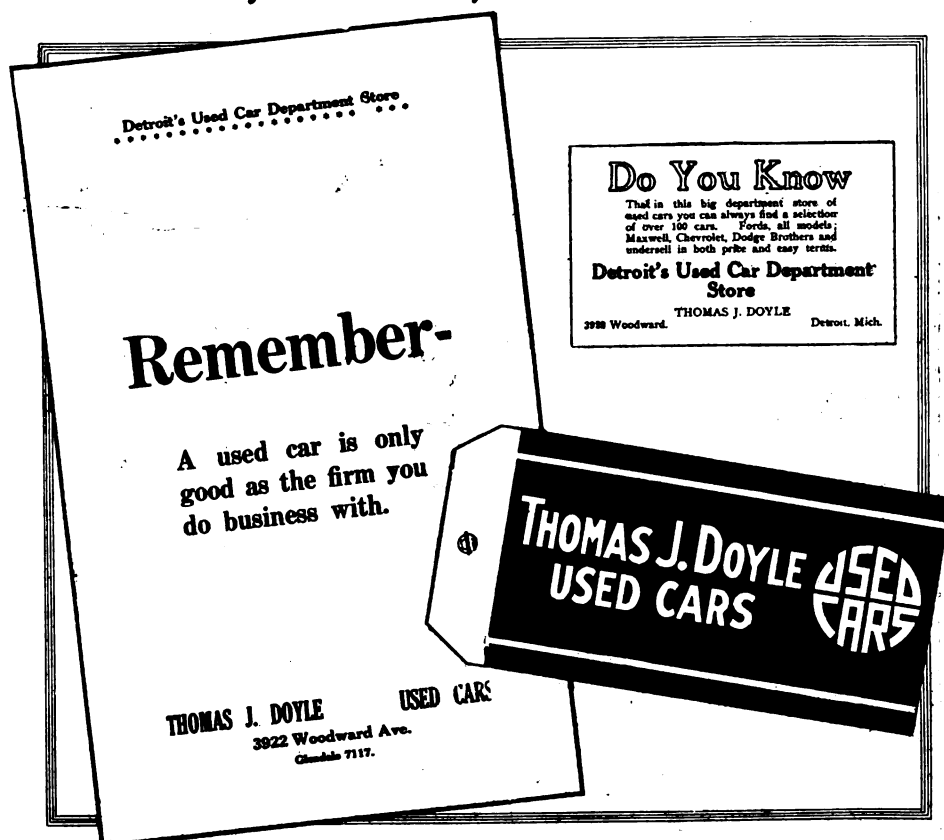
up. So the dealer should know what the salesmen are doing in this respect.

"Fourth, he must know the number of sales, of course. He must know what actual business he is doing. If sales are falling off, he must locate the cause and remove it, if possible.

"Fifth, how are the cars going? So long as they are going well, he can keep

"This bulletin board," Doyle explains, "tells the whole organization just what each salesman is doing and puts him on his mettle. The one who is doing well is rewarded by the publicity given his success, while the one who is doing poorly is rebuked in the same manner. There is no such thing as a salesman loafing half the week in this organization. The board

How Doyle SELLS Confidence in His Used Cars



Advertisements in the daily newspapers often carry Doyle's slogan: "A used car is only as good as the firm you do business with." The tag shown in the illustration is attached to the radiator of a car when it is put on the used car salesroom floor. The brass name plate referred to in the article is of the same design—black background, with the name in yellow and the trademark in red.

up his campaign for trade-ins, but the moment his used-car sales begin to fall he must look to his trade-ins, else he will find himself swamped with used cars and no market for them."

Doyle knows all these things, not just occasionally, but all the time. In order that he may know them at a glance, he has worked out a chart, which shows these five things and in addition shows comparisons with the previous year's business.

Stimulating the Salesmen

Another device which Doyle has perfected as a business indicator is a bulletin board on which are shown the records of all salesmen to the very minute. This board is hung upon the wall where all can see at a glance just how each one is getting along and has proved to be of inestimable value in many ways. The board is provided with grooves opposite each salesman's name and each time one makes a sale a colored disk is slipped into this groove.

shows just what he is doing every hour of every day. The moment he makes a sale, the board shows it; if he doesn't make any sales, there is something wrong.

"Our men work on commission, but why allow salesmen to kill good prospects by their inefficiency or to loaf around when they should be bringing business? Suppose we make a mistake and employ a poor salesman. It won't be long before everyone knows that he isn't delivering the goods. He will be painfully aware of it himself, and if he has the ability he'll hustle to make that bulletin board show favorably for him. If he simply hasn't the ability, the sooner we make a change, the better for him and us too."

As a further stimulant to his salesmen, Doyle gives the man who leads the force each week a considerable bonus on all his sales for that week. This frequently amounts to a sum well worth striving for. As it is determined and paid weekly, each salesman has an opportunity to compete.

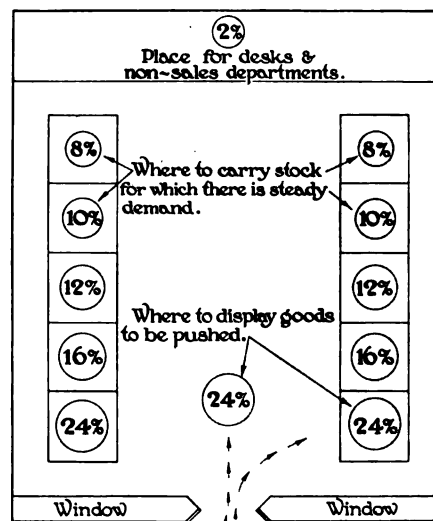
In going after prospects, commercial salesmen call upon them, but salesmen of passenger cars do not call without appointments. Instead of ringing door bells, they ring the telephone bell and make engagements to call. Each one has a desk and when he receives his list of prospect cards, he immediately goes to work to seek appointments.

All members of the organization are required to report for duty at a certain hour in the morning, but thereafter the salesmen may occupy their time as they think best. After calling prospects on the telephone for a time, they may then go out to call in person, or they may continue using the telephone all day long, just as they themselves determine.

Where to Display Goods in the Accessory Store

"THE first ten feet of a store, back from the window, represents 24 per cent of the selling value of the entire store area; the next ten feet, 16 per cent; the third ten feet, 12 per cent; the next ten feet, 10 per cent, and so on in decreasing ratio," is the statement of a man who has made a careful study of retail merchandising.

Once in a while you will go into a store and notice an office or desk close to the front of the store. Except in a bank or brokerage office, such a location costs too much in the value of sales area to be permitted. A caller, on opening the door, naturally continues in for a short distance and his instinct is to turn to the right. The exact spot in any store can be located by setting a watch on the incoming callers and striking an average. That's the place to display the goods to which you most desire to call attention.



Goods for which there is a steady and persistent call should be carried farther back in the store where they will draw the trade; and the new goods, material to be introduced and stuff on which you must put some sales effort ought to be placed well up toward the front. Keep the desks, offices and non-sales areas well back in the store.—Central Service Bulletin.

Do Your Prosperity Clothes Fit?

A Story on Stripping for Action in the Big Up-stream Struggle

By J. O. HENDERSON

General Manager, The Henderson Overland Co., Youngstown, Ohio, Distributor Willys-Knight and Overland cars and Garford trucks



THE automobile distributor or dealer who is not trimming his expenses to meet curtailed business is like a mariner who attempts making port in a storm with full sail. He is bound to bump into something or get bumped.

There is no gainsaying the fact that during the hectic and much over-worked "war period" control of operating and administrative expenses became a forlorn hope, lost in the rush of business—swallowed up in the necessity of keeping the ship manned "at all hazards" from the meagre talent available.

Impossibility of thoroughly efficient management perhaps led to careless managerial habits—a certain dimming of the clear eye to normal proportions.

Those executives who have not re-organized to meet the changed conditions need a speedy awakening to their position. Assuredly prosperity is coming back, but never again perhaps in a manner to justify the prodigal, and in part at least, unavoidable expense of the immediate past. The rough and treacherous water ahead through which we all must sail before reaching the smooth expanse of good times again is likely to shake a lot of us unless speedy and heroic measures are taken to trim the ship.

Has the excess help of boom times been cleared away? Have the "half jobs" left from busier days been combined into half as many "full jobs?" If not, get busy.

Have you worked out time allowances on repair jobs; applied them in your shop, and made comparisons? If you haven't, you probably have a shock in store, and owe your custom-

ers—an apology at least.

No doubt you dislike the thought of reducing the wages of your good mechanics, although you know the price of repair work to the public must come down. If so, consider selling repair labor on a flat rate basis just as soon as your estimates are being met in your shop and are properly recorded.

You might then give some thought to allowing your men a percentage of the price of each job sold and thus to profit by any time saved, it being understood that work improperly turned out will be done over by the man who botched it.

I believe you will find these steps will not only permit of selling labor considerably cheaper, but obviate the necessity of a reduction of your hourly rate to mechanics, who in turn will appreciate the consideration given them and turn out a class of work which will build up your business.

Every man who comes into your place of business for a repair job is a potential purchaser of any article from a new automobile down to a cotter key. You want him coming in.

While on this subject, just make a comparison of the volume of parts issued from your stock room for repairs to cars in your own shop with those sold "over the counter" to some one else making repairs for *your* customer. If you don't already know these figures, get them, and you may find the above suggestions, and any others you can think of, fully justified.

Go into your departmental expenses from the purchase of typewriters down to pen points, not overlooking superfluous verbiage in telegrams and long distance telephone calls.

Some of these suggestions may be tough on a few individuals of your organization, but bear in mind it might be "tougher" on your whole bunch including yourself before the winter is over unless you wake up now.

All these ideas are either already in operation in our plant, or under way, and we expect as a result to be among those present when the roll is called in the "promised land" of general prosperity to which we are steadily and surely advancing.

Dealers Combine to Push Accessories Sales

A NUMBER of accessory dealers in Fort Wayne, Ind., combined recently in a co-operative page of advertising in which each of the dealers took a small space and in which this heading was used over the page: "Why the ostrich buries his head. He can't stand the gaff when calamity blows his way. There are no ostriches among the accessory dealers." In addition to this the page car-

ried some copy telling about the motorists' need for accessories and ended with this sales punch: "BUY ACCESSORIES NOW—the dealers of this merchandise are meeting the general price decline with automobile merchandise that was bought at the high price period. This merchandise is being sold at the lowest margin possible."

The plan has been generally profitable.

Why Not Install a Modern Car Washing Department?

This Car Laundry Does a Job Every Six Minutes and at \$1.25 a Car It Is Making a Profit for the Woman Who Runs It—The Story Tells How

IT is possible to launder automobiles for \$1.25 and make a profit. It is being done by a woman. How is it done? The old story of efficiency in plant management and quantity production is the answer.

Mrs. Gus A. Showalter of Indianapolis, who manages the S. & S. Auto Laundry, demonstrates month after month that if the system is right a profit can be made. She has been in charge of the laundry now for nearly two years and is turning out clean automobiles at the rate of one every six minutes during the rush hours.

Think of it—a car washed and polished every six minutes. The success of the project lies in the fact that every employee knows his post just as well as

every fireman in the nearby engine house knows where he belongs when an alarm is turned in, and the employees at the car laundry get on the job as quickly.

From the standpoint of a factory designer, the plant is excellent in its layout in that there is no back-tracking and not even a curve. The "soiled" machine comes in the front door, the driver goes into the little but comfortable office to rest, and in six minutes his nice clean car is lined up at the front curb ready for him.

As to plant equipment—there is not a useless piece of mechanism in the place. Everything found there has a certain function, and through several years' of experience, the owner knows

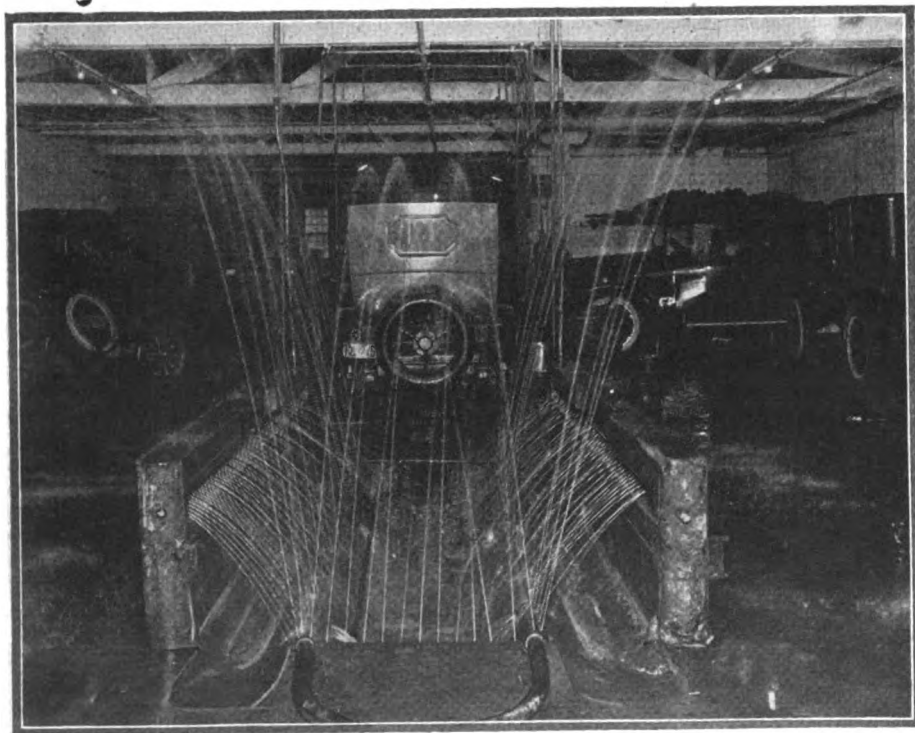
the maximum number of men that can be used to advantage, and there is no idle labor. From the time the plant opens in the morning until after the rush hour in the evening, there is a steady stream of machines going over the cleaning route inside the building. They come from all parts of the country, especially during the touring season, and the Indianapolis trade fills in the dull spots.

The plant was started five years ago by Gus A. Showalter and another man who sold out later when the United States began its argument with Germany. Showalter is treasurer of Keith's theater in Indianapolis, and having been with the Keith company for many years he could not see his way clear to quit and take active charge of the car laundry. He tried the hired manager plan for a time, but finding that unsatisfactory, he was relieved of further worry by his wife, who took charge and who has been the business getter since that time.

Here is the way the cars are routed when they enter the front drive. As soon as the owner leaves, one of the employees runs the car rearward to a point where it can be reached with a compressed air blower. Here all the dust and loose dirt is blown from the exterior and interior of the machine. As this is being done the machine in front is being moved forward and the car just entered takes its place on what is known as the soaking rack. This rack is of concrete with concrete sides about four feet high. Inlaid pipes, perforated, cause a spray of water to reach every necessary spot of the machine, both sides and bottom. The spray is sufficiently strong to not only loosen the caked dirt, but to wash most of it away. There is a pit beneath that takes care of the sediment and the overflow water. While this is going on an employee washes the top of the machine.

The automobile is moved forward from the soaking rack to the wash rack. Here there is an employee to each wheel. He is armed with a big sponge, soap and plenty of water. He knows just what parts of the machine he is to soap and wash, and he expedites the washing. Here is an idea of Mrs. Showalter: She

The Soaking Rack That Speeds Car Washing



With the device shown above the S. & S. Auto Laundry, Indianapolis, is enabled to speed up car washing so that a profit may be made at a charge to the customer of \$1.25 a car. The cars are allowed to stand in the rack for a short time while the water, effectively directed, loosens and washes away the rough dirt

agrees that soap used in the usual way is injurious. However, she declares, that what makes it injurious is the fact that in the average garage only one man washes the machine. He takes his time and more often than not the soap is allowed to dry on the paint, the injurious elements eating in. With her plant, she declares that it all is done so quickly that the soap does not have a chance to eat into the varnish and, therefore, is an aid in removing dirt without being harmful to the finish.

From the wash rack the car is moved on to the polishing rack where three employees armed with chamois await it. They also show some speed, and just as soon as they have finished the car is run right out the back door up the alley and around to the front, where the owner steps in.

The foregoing applies, of course, to the ordinary job. In case the patron wants his crankcase cleaned or wants the underneath portions of his car to have a real bath, there is what is known as the kerosene rack, off to one side, with a pit much the same as that in the soaking rack, and here employees apply the kerosene.

Of all classes of patrons, the traveling salesman heads the list in numbers. He is much in evidence on Friday, Saturday, Sunday and Monday. He comes into town for the week-end with his car covered with mud and dust from a week's tour of the road, and he wants a clean car quickly to take the family out evenings. He gets it quickly.

Another source of trade is from the garages and retail automobile and service plants. One of the largest automobile plants in Indianapolis, a plant that operates many service cars of its own, is one of the large individual customers of the laundry. This plant has a well equipped laundry department where it will wash other cars at from \$2 to \$2.50 apiece, but when it comes to washing its own cars, the company sends them to the Showalter laundry. At one time Mrs. Showalter had a contract for washing more than 300 cars for this particular company.

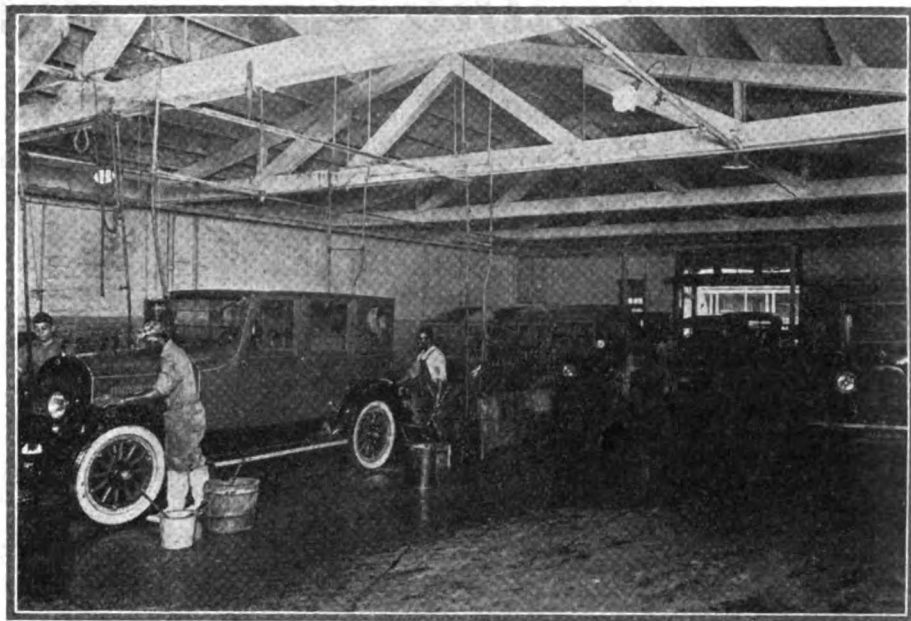
"We lost money for a couple of years until we got the public educated to coming to our place," said Mrs. Showalter. "It took time. The public was skeptical. Most automobile owners could not see how it was done and because of the cheapness of the price, which used to be one dollar, they looked askance at such a proposition. Once they began coming, however, things looked differently. We employ twelve persons: ten during the day and two at night. We make no attempt at night for speed in washing cars.

"I believe one of the best features is the soak rack. We have spent months experimenting on this particular feature in order to get the water sprays so directed that water would hit just the right spots. Most of the mud is caked underneath the fenders, but there are makes and makes of fenders and various shapes. We had to get the pipes so lined that we could reach them all with an average maximum of water. The soaking rack

surely makes the work of the washers easy. We have tried it out and we know. If we are not busy and can let the car stand on the rack a trifle longer

cars washed more often than most other persons, obtained lists of the traveling salesmen in the immediate territory. Lists were secured through the various

Washing a Car Every Six Minutes



In this Indianapolis "laundry" there's no lost motion. The cars pass through in a straight line and are attacked successively by trained hands who are experts in their particular work. The proprietor says business was rather "dull" the day this picture was taken—but the line is there just the same

than usual, there is very little for the four washers to do."

Incidentally, Showalter, after having ascertained that traveling men had their

traveling salesmen's organizations and through the big jobbing houses, and with this list he conducted an extensive direct mail campaign for this class of business.

Giving the Used Car New Car Exposure

USED cars will move in greater volume if they are placed in cleaner, better-lighted and better-furnished salesrooms. So firmly convinced of this is P. R. Ward, manager of the Auburn Sales Co., Cleveland, that in the planning of his new Auburn sales and service building he is going to display used cars in a front salesroom that will be equal in furnishings, appointments and appearance with the salesroom for his new cars.

Ward, with many other progressive dealers, realizes that one of the difficulties in moving used cars—and unless they are sold they will dam up the stream of moving new cars—is that they often have been displayed in back rooms, along with the service stations. The rooms are often unkempt and dark. Patrons, when they go back, pass cars that are being repaired. Tools are strewn about the floor. There are odors of oils and gas in the air. The used car doesn't get a square deal under such circumstances. The car doesn't look quite as good as it would in a light, airy, comfortable compartment.

"Take the used car from the dingy back room and place it in a handsome

exhibition room and a value is added to the car at once," says Ward. "The salesman will do a better job and the patron will be more interested in both the car and what he says. A dark and dingy room has a depressing effect; and a light, airy one the opposite. How far would a dealer get if he should display his new cars in a service station? The used-car dealer won't get much further by putting his cars in quarters that are unsanitary and often dirty."

Ward's used-car salesroom will be on the second floor. It will have a frontage of 80 feet directly above the new-car salesroom, and display windows have been provided that will readily attract attention from motorists in the street and pedestrians on the opposite sidewalk. Directly behind the used-car salesroom will be the space devoted for rebuilding the used cars.

With the average of trade-in deals approaching 90 per cent, Ward believes that the handling of used cars means more to the dealer than ever before. So this dealer has adopted a used-car policy which provides for complete overhaul before the traded-in cars are put on the floor to be sold.

Truck Dealer Stirs 'Em Up With "Blind Ad" Campaign

Street Railway Company, Newspaper Offices and General
Public Show Curiosity and Sales Force Has to Be Tripled
When Mystery Is Revealed

PRESIDENT CHARLES J. SWAIN of the Swain-Hickman Co., distributor for Republic trucks, Philadelphia, is chuckling over the fun he has just been having with the street railway company, the local news departments of the newspapers and the general public. He feels that he has the right to be merry, particularly because of the success which was attained for his selling organization through a campaign of "blind" advertisements which began on July 24 and which has now been revealed, featuring a new truck model.

On the date mentioned, there appeared in the local newspapers a curiosity-arousing, conspicuous, though not large display advertisement, making the bare announcement that "Rapid Transit Is Coming to Philadelphia." As that is a consummation devoutly wished for a long, long period by the street car patrons of the Quaker City, it succeeded in making conversation—the end, or rather one end, of all publicity.

When three or four more similar advertisements, in black lettering, with considerable margin and with nothing else in them except "Rapid Transit Is Coming," or a like slogan fraught with mystery, had appeared, the telephones in the news departments of the city papers began to tinkle and questions about the new "Rapid Transit" began to pour in on the city editors from street car patrons. But the advertising departments, if they did know, kept faith and did not spill the tidings.

When, however, during the second and last week of the "blind ad" campaign, emissaries of the street railway company, greatly perturbed for fear some outside concern really was trying to do the unprecedented and give the city "Rapid Transit," as a rival, made inquiries, some extremely close to the trolley company tried desperately to find out the true inwardness of those puzzling advertisements. The peculiar significance of these announcements lay in the fact that the "trading name" of the street railway concern is "Philadelphia Rapid Transit Co.," and that the subject of rapid transit has been prominent in the public mind for years, particularly during the last twelvemonth, with legislation promised to improve the service and obtain the operation of lines built

or under way. All the news departments could do was to refer their questioners to the advertising agency which had placed the business.

In keeping with the spirit of the thing, the agency held its tongue until the campaign had gone pretty nearly to its end; then it let the newspapers and the Rapid Transit Co. into the secret. It

Dishing Out Excitement

"We're going to have a rival," shrilled the street railway company.

"Looks like satisfactory service at last," said the straphangers.

"What's it all about, Mr. City Editor?" queried the General Public.

"Ha, ha!" laughed the president of the truck company that inserted the little Blind Ads. "We've just put on three times as many salesmen to handle the crowds."

even took more than one explanation to reassure some of them that there was no immediate danger of their having a competitor for passenger service from that direction.

The week following, came the first

public announcement of the connection between the "blind ads" and the new Republic motor truck Rapid Transit model. A series of larger, detailed advertisements was begun and is still running. While the secret was out, the talk caused by the novel plan touching intimately so many interests in the life of the city, continued.

Between chuckles, President Swain of the company said of the campaign and its result:

"We were not quite prepared for the revelation this publicity brought us. It was something far beyond our expectations and at a price we hadn't dreamed of. We had to triple our sales force, for the public displayed such unusual interest that our regular staff could not handle the prospects and customers."

A point of the new and larger series of advertisements, following the "blind ad" series, is to classify the list of visitors during this "transportation sale," as it is called. As shown by the valuable new prospect list thus derived, the classifications include: Farmers, teamsters, butchers, bus owners, grocers, plumbers, produce merchants, furniture dealers, manufacturers, lumber merchants, funeral directors, hardware dealers and dry goods merchants.

Thus the publicity plan has sent its message and actually brought to see this new model truck representatives of all the foregoing occupations.

Another reason why Swain can't stop chuckling.

An Advertising Idea for the Repair Man

RECENTLY the Fort Wayne *News and Sentinel* ran a cartoon which could be used with very good effect by repairmen in advertising for work. The cartoon showed an automobile addressing its owner in these words:

"Here you are again this Sunday! I suppose you're going to pile me full of people and drive me over those new plowed fields they call roads which lead to mother-in-law's. You're a fine sort of a driver, you are. My springs creak now, my grease cups are dry, my left front wheel's out of line, you haven't cleaned my crankcase since last winter

and I haven't a spare tire to my name. And yet you expect me to go to your mother-in-law's and stand in the sun all day. Alright, I suppose I'll go, but if you're late about getting home don't say I didn't tell you all about it before we started. I'm sore, I am, and I hope you have to eat dust all the way there and back. Come on, bring your lunch, let's get going. Come on, you piece of cheese, you've got your nerve, calling me a flivver."

This sort of a talk could be used to good advantage in advertising that cars will be gone over at reasonable prices.

KILL OR CURE

Reilly Prescribes for a Town That's
Suffering from Open-car-itis

By NEAL ADAIR



"MAKE 'em buy enclosed cars? Sounds good, but how?" Jarvis, manager of the Sennett branch at Northville, demanded of his chief, Reilly, who was dissertating on ways and means of building a year-round business.

"Just make 'em want 'em—make 'em buy 'em," Reilly answered, knowing that whenever Jarvis got warmish under the collar he became interested, which was the object of the Sennett distributor's rather provoking reply.

Jarvis performed according to program. "Make 'em buy 'em," he shot back. "I suppose you'd go out and have 'em arrested for indecent exposure if you caught 'em driving an open car."

"Well, that might be one way of getting folks interested in enclosed cars up in Northville," Reilly commented, "but I was thinking of something not quite so drastic. In fact, I was thinking of three things. From to-day on, in Northville, why not show nothing, drive nothing and demonstrate nothing but enclosed cars?"

Jarvis whistled. "And let six weeks' open car business, providing we don't get too many early frosts, go right to pot—I'd look fine, chasing myself out of my job like that."

"Branch managers don't chase themselves out of their jobs; the boss usually does that little thing, at least in most of the cases I've heard of," Reilly observed. "But, Jarvis, I'm not going to chase you out and you're not going to chase yourself out if I can help it. You have things humming along finely up there and everything is top notch except this confounded hibernating habit of your Northville folks. They think an automobile is something to be put on the pantry shelf or somewhere as soon as the city relatives are shipped back home the day after Thanksgiving. We've got to get them thinking year round, or almost year round motoring, and the only way to do it is to put over the sedan and coupe in striking fashion."

"But we always talk sedans and coupes when we get a chance," said Jarvis, "and we've sold some—"

Reilly broke in. "Sure you talk 'em when you get a chance and you've sold some—I would let you chase yourself off the job if you hadn't—but the en-

closed car idea is going slow. We've got to kick some life into it and convince these Northvillagers of yours that only frogs and bullheads dig for the mud when the north wind begins to blow."

Reilly was silent for a moment. Then he went on: "Jarvis, it's radical, maybe, but it's different, and I have a notion something different will get your Northville folks talking. From now until November first let's advertise nothing, talk nothing, show nothing, drive nothing and demonstrate nothing in Northville but enclosed cars. Let's see what will happen in the six weeks—and what will happen through the winter because of what happened then."

"We have a few sedans and coupes to spare right now. We'll ship them out this afternoon and you can get busy right off on the new program. You are driving a touring car; turn it into used car stock and doll yourself all up with one of those green sedans. You have a mixture of models on the salesroom floor; shove 'em all in the background except the enclosed jobs, and show the full enclosed line. You have two—or is it three?—demonstrators. Get rid of them, too, and do all your demonstrating with a sedan or coupe."

"But a touring car prospect—you couldn't—"

"Sure you could," Reilly retorted. "Take him out in a sedan, too. A Sennett sedan is a Sennett, isn't it?—and you're selling Sennetts. Show him the sedan—how refined it is in appearance, how comfortable it is in all kinds of weather, how smoothly it rides. You don't have to talk about the difference in price, unless he makes you—which will show he is interested enough in the sedan to be curious as to how much more it will cost him than the touring car. Let him see sedan and feel sedan and think sedan, and then you see what happens."

"But we might lose the touring car sale," Jarvis suggested.

"Maybe, in one case out of a hundred," Reilly replied, "though it's hard to see how. The demonstration with the sedan gives the prospect the finest possible impression of the Sennett as an automobile. If he has the money he's quite likely

to want just that sort of automobile, which means a larger commission for you and your salesman, and another enclosed car running around Northville, saying with every toot of its horn that personal transportation, these days, is greater than the weather."

"And if he hasn't the money?" Jarvis asked.

"That's easy," said Reilly. "If he is still in the open car prospect class after the sedan demonstration, you've at least sold him on the Sennett, with all the selling influence a demonstration has. And if he still demands an open car demonstration, which may happen sometimes, you'll manage to find a demonstrator around somewhere in the back-ground."

"It's just a case of doing something different, Jarvis, to get your town talking and get your branch going on something that will take some of the dip out of your winter sales curve. You aren't pulling the curtain forever on touring cars and roadsters and you aren't forgetting, of course, that you have them in stock. Your town won't forget either, because the open car is just naturally accepted by everybody. It's the enclosed car we need the educational work on and the quickest and surest way to educate the ordinary run of people is to show them, not merely tell them."

"I'm on," Jarvis interrupted. "We'll try it and we'll do it, and we'll get out of this cold weather hole just like that."

He pointed to a big truck in an alley beneath the side windows of Reilly's office. The truck had slipped into a sand-hole and its rear wheels spun under power that failed to find traction. The driver tried half a dozen starts, then got out and shoved a plank under one of the wheels. As the clutch slid in the truck climbed up the plank and went on its way.

"Just like that," Reilly agreed. "I'm not much on theology, but I don't believe there is any such thing as a bottomless pit. Give a good man a foothold and he'll pull out of anything—even in Northville."



Dollar Ideas

Earn a Dollar

MOTOR WORLD will pay \$1 each for ideas for this department. The ideas should have to do with sales and business management. The idea should be in two parts:

- 1—The problem.
- 2—The solution.

But if you'll get the idea on paper in any fashion whatsoever, we shall be glad to shape it up for you. Do two things:

- 1—Help some other man.
- 2—Make a dollar for yourself.

Making Standard Cars Into Custom Built Jobs Stimulates Sales

There's Profit in the Plan on a Quantity Basis and It Makes Enthusiastic Salesmen

PURCHASING or ordering tops and trims specially made in sufficient quantities to outfit standard cars, transforming them for all intents and purposes into custom-built models, according to dealers who have tried the plan, often has the double effect of greatly stimulating sales and elevating the taste of the trade.

Among those who have been following out this idea successfully is E. V. H. Wilkie, of the Edward Wilkie Motors Co., who handles Buicks at 917 North Broad Street, Philadelphia. His sales-

men average 3 per cent on sales of both new and used cars and 5 per cent on sales of accessories. They also receive a bonus on cars that have proved less easy to sell, on the same plan that department stores award "p. m.'s," or premiums, to members of the sales force who move difficult stocks.

Wilkie, who helped to design the first "California" tops, saw that the trade was becoming more critical—in other words, had become "auto-wise"—demanding everything as high grade as possible for the money, for cars of a cer-

tain style and price.

They had begun to look after the small details of such cars and wanted the machines to look as expensive as possible and have an individuality. They had even grown "fussy" about cover snaps and monograms—they demanded carefully finished monograms. In short, customers became so discriminating that it was found in some cases to make sales it was advisable to order special tops and fittings to satisfy the trade.

When it was found that this demand was spreading rapidly it was realized that with a proper arrangement for quantity, there was a fair profit in transforming stock cars into custom-built jobs, through fancy tops and trims. The salesmen were enthusiastic, for the plan readily promoted sales from its inception.

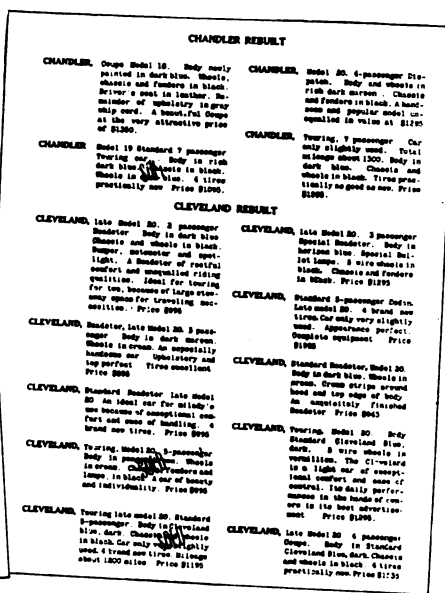
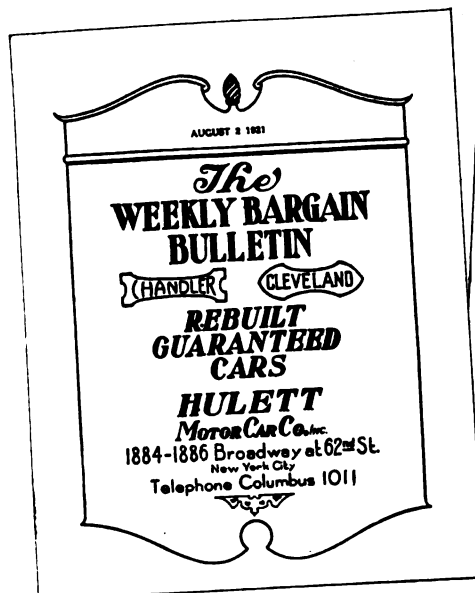
The main idea, as carried out in the standard Buick five and seven-passenger cars, is to equip them with special "California" top; slip cover of the same fabric as the top lining, and matching it in shade; flaps and hand-grips of the same and similar trimming on seat cushions and armrests. Five color tones are used in this work. With improved windshield, double disc wheels, double tire rack and both front and rear bumpers, such a car presents virtually all the refinements of the custom-built job. For a car retailing at \$1,670, the flat price of \$500 can be added, making the price of the car and equipment to the customer the reasonable one of \$2,170, still leaving a fair profit for the dealer.

Bought singly, the equipment would be itemized as follows:

Top, \$400; slip covers, \$60; disc wheels, \$60, and accessories, \$100, or \$620 for the total of the list. With a quantity discount from the manufacturer there is sufficient profit in making the flat price of \$500 for the equipment to each customer.

The Wilkie company sold eighty-nine cars in the June-July period.

Weekly Used Car Bulletin Sells for This Dealer



A weekly bulletin listing "bargains" in rebuilt, guaranteed used cars was responsible for a 250 per cent increase in the rebuilt car business of the Hulett Motor Car Co., Chandler and Cleveland dealer in New York. The bulletin lists all rebuilt cars on hand at the time of its issuance with a short description giving the price. A rubber stamp "Sold" is used to indicate those cars that have been disposed of between the time of the printing of the bulletin and actual mailing of it. The accompanying illustration shows the front cover and one of the inside pages of a recent issue

Gets a Smile Into Ads

THERE'S nothing like getting a little laugh into advertising, particularly when you are advertising a product which adds so immensely to the joy of

Editorial Observation

Let's Not Have a Price War

IT is natural that dealers should become alarmed, in view of the events of the past few weeks, over the possibilities of a price war in the automobile business. Price reductions have been numerous, some of them apparently based on lowered production costs, others forced by competition, and the resultant confusion has slowed up sales. The need now, and the immediate need, is for a restabilization of the entire price question, so that people who normally would buy in September and October, counted on by dealers as good selling months, will not be influenced to wait for further cuts.

It would be futile to expect that the industry can go on for years, or even a year, without price changes. Such a condition would not be healthy, as selling prices must keep step with the costs of materials, labor and other items which are likely to have a still further downward trend as the readjustment progresses. But repeated price changing by a manufacturer or group of manufacturers breeds suspicion in the public mind not only of the commodity values of these particular manufacturers but of all others making like products. The need of to-day, like the need of last spring, when Motor World discussed the same subject, is for prompt action by manufacturers either to put their prices on a new basis or say they are not going to, so that merchants in the business can go forward with confidence that they have something to sell which will "stay put," at least for a reasonable time.

Dealers who must sell cars, and sell them at a profit, this fall if they are to maintain their own and help maintain the manufacturers' organizations, have a right to expect that the manufacturers will:

- 1—Settle the price question without delay.
- 2—Protect their dealers in every possible way in case reductions are made.
- 3—Employ every facility of their sales and advertising departments to help dealers get in motion for an aggressive fall selling campaign.

A price war at this time would be unthinkable. Motor World believes that the industry has too much common sense and too much faith in its future and too much regard for its dealer organizations to enter upon any such movement.

Association and the Big Dealer

SOME distributors and dealers of considerable wealth and influence have been heard to express doubt lately of the wisdom of investment in association work, in view of price cutting and other unethical tactics indulged in by competitors who were not members of the association or were disgracing it if they were. Such doubt is only natural, yet it is not justified by history or by careful observation of present conditions.

Business practices in all trades have been raised to higher standards only by co-operation led by men with vision enough to see its possibilities and with money to invest in agencies to put their beliefs into effect. There must be leaders in every co-operative movement and there must be men financing the movement who will stick to their convictions and see them through.

Nor is such effort and expenditure wholly unselfish. If a business man who operates on a clean, fair and square basis in his dealings both with competitors and customers can bring some of his unethical competitors up to that basis he makes his own business life pleasanter and in many cases more profitable. From a selfish standpoint it is only an incident that he helps the other fellow.

These are trying days for many associations in the automotive trade. Revenues are dropping off and secretaries and their staffs are discouraged or even physically handicapped, perhaps, in their work. Yet co-operation as exemplified in association work was never more needed than now. Automotive men who can afford to bear the burden of supporting practical association work should be found in the forefront now, sustaining the efforts of their association secretaries. And some who may think they cannot afford to keep up their membership and give the necessary time to co-operative work should think twice before dropping out of the forward procession. Perhaps a little sacrifice somewhere else will enable them to stay in line for their own good and the good of the industry.

It is a little early yet for complete reports of fall shows and other promotional activities to stimulate interest in automotive products but two cities have already fixed definite dates for fall shows and several others are considering the enclosed car week idea. St. Louis will have a show for cars, trucks and automotive equipment, October 15-22, at the same time as the Missouri Centennial, and Washington, D. C., will have an enclosed car salon November 14-19. Louisville and several other cities are engaged in tentative plans for an enclosed car week. There are abundant signs that the trade intends to make the most of the opportunity to cash in on improved business conditions promised and already apparent as an accompaniment of the fall season.

Up to Aug. 1 of this year 13,000 automobiles, carrying 45,000 persons, entered Yosemite National Park, according to records kept by Wallace Curtis, associate manager of Camp Curry, in the Park. In the same period, 44 horse-drawn vehicles entered the valley. This is the largest number of automobiles and the smallest number of horse-drawn vehicles ever to enter the valley in any seven months of its history.

Let's put a red cross on the calendar for Nov. 11. Besides being Armistice Day it marks the beginning of the period, Nov. 11-24, during which the American Red Cross will hold its Fifth Annual Roll Call.

LETTERS *from* READERS

A Manufacturer Wrote This Letter to a Jobber

Dear Jobber: I note with tremendous satisfaction that you have more than trebled your business this year over last, and I also note that your good friend Mr. — expects to do next year \$8,000,000 worth of business. I want to say to you, Jobber, don't let him do it. Forget about it. If you do half again as much business next year as you did this year you are doing all you can possibly handle. You are doing all you can swing. You are doing all that you can physically and mentally take care of. At the rate at which you are going, to keep up this same proportion, you will both be dead inside of two years.

Now, in the first place, you haven't enough money for the business you are doing right now, and you are getting into hot water to such an extent that it is a question in my mind, if, when the fall comes, you are not going to be "sat on," and knocked on the head pretty hard. If you are doing to other people what you are doing to us, there isn't any question about it, that somebody is going to "holler," and all it takes is one "holler" on a concern like yours that has grown so tremendously to put the whole "shebang" on the blink.

You owe us at the present time on acceptances \$3,582.23, and these acceptances run way up into October. In other words, you are taking three and one-half months to four months to pay your bills, and that is too long a time for anybody to give you consistently. Then you owe us on open account \$1,000. Now, we are not one bit worried about you owing us \$5,000, but I do think that the length of time that you require to pay your bills is a little bit too much, not only for us, but for you. You are getting into the habit of "pyramiding." You can't afford to "pyramid" this year. When you have actual assets over liabilities of \$1,000,000 of which a considerable part is in what we call cash assets, or assets that can be turned into cash inside of 48 hours, then you have the right to owe all kinds of money on all kinds of terms.

I am giving you this for what it is worth. Think it over; it is meant well. I am going to tell you quite frankly that our money should be paid to us with a 60 day, not a 90 day, acceptance; that other people will want their money in this way, if not to-day, then very shortly, and you must prepare for it within the next month or two. My advice is, sell what you have in stock, and don't try to force ridiculous amounts of sales. Rather let the quantity be a little smaller

and the profit on each individual item a little bit more.

We are mighty anxious indeed to see your company established on a firm basis in the least possible time, but large sales and small profits, and plenty of headaches will not put you there.

Sincerely yours,

MANUFACTURER.

—And This One to Motor World

Editor Motor World: Handing you enclosed copy of letter that I sent to the — Co., of —. Now here is what happened. Two days after they got my letter, one of their largest sources of supply told them that they would have to give them sixty day trade acceptances, instead of ninety. That set them thinking still further, with the result that they had an inventory made of their stock. They found, for instance, that they had seven kinds of valve lifters. They immediately got busy, and cleaned out four types of valve lifters, and are now running on three, and so on throughout the entire line. Their reasons for having duplications of articles was that they had to get merchandise in a hurry, and bought from different manufacturers.

Inside of three weeks they brought their stock down to what they consider a reasonable stock; they got rid of all duplications. All one partner did was to go around and collect money. When I saw them a few days ago, they had a balance in the bank of almost \$10,000. That was enough to meet all the acceptances that were coming due within the next fifteen days. They are going to stick to this proposition, work on their own capital, give for the last month's bill sixty day trade acceptances; inside of 90 days they expect to be on a thirty day trade acceptance basis, and they are going to hang on to this method for the balance of the winter.

The result will be that when it comes to taking stock on the first of January, they are going to have a comparatively small stock of nothing but live items, and they are going to make sure of a real cash balance, know exactly where they stand and for the year 1922 will be operating on their own money, and the surplus stock that they are going to carry will be on the money that will have been loaned them by the bank.

This is what these boys are doing, and is what should be done throughout the entire industry, for the sake of the industry, and the individual jobber.

Yours very truly,

MANUFACTURER.

A Timely Window Display



The window display that fits into the thought of the day—that is timely—is always effective. Here's one used recently by Charles A. Hannon, Los Angeles tire and accessory dealer, during the Elks' convention in that city

A Department of
BETTER MECHANICS

Conducted by J. HOWARD PILE

No. 208

When asking for information, please state whether you maintain a permanent file of Motor World, as many inquiries are answered by reference to previous issues

Time Estimates on Studebaker Repair Operations

Factory Has Worked Out a Complete System Which Makes It Possible to Estimate on Time and Parts Both

Part III (continued)—List of Parts Needed for Each Operation

List of Parts for Single Operations

(Continued from September 7 issue)

SERIES 19 FOUR				SERIES 19-20 LIGHT & SPECIAL SIX				SERIES 19-20 BIG SIX			
Operation No.	Quantity	Part No.	Name of Parts	Operation No.	Quantity	Part No.	Name of Parts	Operation No.	Quantity	Part No.	Name of Parts
Group K				Group K				Group K			
1	1	31615	Gasoline tank.	1	1	31600	Gasoline tank.	1	1	31600	Gasoline tank.
2	1	31623	Gasoline tank gauge.	2	1	31611	Gasoline tank gauge.	2	1	31611	Gasoline tank gauge.
	1	21870	Gasoline tank gauge glass.		1	21870	Gasoline tank gauge glass.		1	21870	Gasoline tank gauge glass.
3	1	35314	Gas tank to vacuum tank pipe.	3	1	35313	Gas tank to vacuum tank pipe.	3	1	35310	Gas tank to vacuum tank pipe.
4	1	19598	Vacuum tank float.	4	1	19598	Vacuum tank float.	4	1	19598	Vacuum tank float.
Group L				Group L				Group L			
1	1	30378	Generator complete.	1	1	30378	Generator complete.	1	1	30378	Generator complete.
2	4	17794	Rubber bumper for coupling.	2	4	17794	Rubber bumper for coupling.	2	4	17794	Rubber bumper for coupling.
3	2	17792	Couplings.	3	2	17792	Couplings.	3	2	17792	Couplings.
	4	17794	Rubber bumper for coupling.		4	17794	Rubber bumper for coupling.		4	17794	Rubber bumper for coupling.
4	1	19099	Generator armature complete.	4	1	19099	Generator armature complete.	4	1	19099	Generator armature complete.
2	19086	Carbon brushes.		2	19086	Carbon brushes.		2	19086	Carbon brushes.	
5	4	19086	Carbon brushes.	5	4	19086	Carbon brushes.	5	4	19086	Carbon brushes.
6	1	12154	Generator bearing, upper.	6	1	12154	Generator bearing, upper.	6	1	12154	Generator bearing, upper.
7	1	15854	Generator bearing, lower.	7	1	15854	Generator bearing, lower.	7	1	15854	Generator bearing, lower.
8	1	30670	Relay complete.	8	1	30670	Relay complete.	8	1	30670	Relay complete.
9	1	30683	Storage battery indicator.	9	1	32715	Storage battery indicator.	9	1	32715	Storage battery indicator.
10	4	19086	Carbon brushes.	10	4	19086	Carbon brushes.	10	4	19086	Carbon brushes.
11	1	32050	Battery to frame cable.	11	1	32050	Battery to frame cable.	11	1	32050	Battery to frame cable.
12			No parts required.	12			No parts required.	12			No parts required.
13	1	10072	Battery cable sleeve.	13	1	10072	Battery cable sleeve.	13	1	10072	Battery cable sleeve.
Group M				Group M				Group M			
1	1	19837	Dist. contact arm to point.	1	1	19837	Dist. contact arm to point.	1	1	19837	Dist. contact arm to point.
2	1	21383	Dist. timer adj. screw with point.	2	1	21383	Dist. timer adj. screw with point.	2	1	21383	Dist. timer adj. screw with point.
3	1	32787	Lighting and ignition switch complete.	3	1	32787	Lighting and ignition switch complete.	3	1	32787	Lighting and ignition switch complete.
4	1	16979	Distributor drive gear.	4	1	16979	Distributor drive gear.	4	1	16979	Distributor drive gear.
	1	16981	Distributor driven gear.		1	16981	Distributor driven gear.		1	16981	Distributor driven gear.
	1	16980	Distributor drive gear pin.		1	16980	Distributor drive gear pin.		1	16980	Distributor drive gear pin.

List of Parts for Single Operations

SERIES 19 FOUR			SERIES 19-20 LIGHT & SPECIAL SIX			SERIES 19-20 BIG SIX		
Operation No.	Quantity	Part No. Name of Parts	Operation No.	Quantity	Part No. Name of Parts	Operation No.	Quantity	Part No. Name of Parts
Group N			Group N			Group N		
1		Oxygen gas.	1		Oxygen gas.	1		Oxygen gas.
2		Oxygen gas.	2		Oxygen gas.	2		Oxygen gas.
3	8	1520 Valve cap gaskets.	3	12	1520 Valve cap gaskets (Lt. Six only).			
3	1	32097 or 32098 Valve cap.	3	1	32097 or 32098 Valve cap (Lt. Six only).			
4	1	1520 Valve cap gasket.	4	1	1520 Valve cap gasket (Lt. Six only).			
4	1	1520 Valve cap gasket.	4	1	1520 Valve cap gasket (Lt. Six only).			
5	8	1520 Valve cap gasket.	5	12	1520 Valve cap gasket (Lt. Six only).			
6	1	32090 Valve.	6	1	32090 Valve.	6	1	32090 Valve.
7	1	1520 Valve cap gasket.	7	1	1520 Valve cap gasket (Lt. Six only).	7	1	32092 Push rod.
7	1	32092 Push rod.	7	1	32092 Push rod.	1	32094	Push rod guide.
8	1	32094 Push rod guide.	8	1	32094 Push rod guide.	8	1	32092 Push rod.
8	1	32092 Push rod.	8	1	32092 Push rod.	1	32094	Push rod guide.
8	1	32094 Push rod guide.	8	1	32094 Push rod guide.	9		No parts required.
9		No parts required.	9		No parts required.	10	1	32577 Cylinder head.
10			10	1	39001 Cylinder head (Sp. Six only).	11	1	30214 Cylinder head gasket.
11			11	1	39002 Cylinder head gasket (Sp. Six only).	1	31819	Radiator outlet hose.
12	1	32100 Piston with bushing.	12	1	31819 Radiator outlet hose (Sp. Six only).	12	1	32633 Piston.
1	32102	Piston pin.	12	1	32100 Piston with bushing.	1	16890	Piston pin.
4	32103	Piston rings.	1	32102	Piston pin.	1	16899	Bushing.
1	32634	Oil pan gasket, right.	4	32103	Piston rings.	4	30005	Piston rings.
1	32636	Oil pan gasket, left.	1	32635	Oil pan gasket, right.	1	32635	Oil pan gasket, right.
2	6x15	Cotter keys.	1	32637	Oil pan gasket, left.	1	32637	Oil pan gasket, left.
		1 gal. motor oil.	2	6x15	Cotter keys.	4	6x15	Cotter keys.
13	1	32100 Piston with bushing.	13	1	32100 Piston with bushing.	13	1	32633 Piston.
1	32102	Piston pin.	1	32102	Piston pin.	1	16890	Piston pin.
4	32103	Piston rings.	4	32103	Piston rings.	4	30005	Piston rings.
2	6x15	Cotter keys.	2	6x15	Cotter keys.	1	16899	Bushing.
		1 gal. motor oil.				4	6x15	Cotter keys.
14	4	32103 Piston rings.	14	4	32103 Piston rings.	14	4	30005 Piston rings.
1	32634	Oil pan gasket, right.	1	32635	Oil pan gasket, right.	1	32635	Oil pan gasket, right.
1	32636	Oil pan gasket, left.	1	32637	Oil pan gasket, left.	1	32737	Oil pan gasket, left.
2	6x15	Cotter keys.	2	6x15	Cotter keys.	4	6x15	Cotter keys.
		1 gal. motor oil.			1 1/2 gal. motor oil.			1 1/2 gal. motor oil.
15	4	32103 Piston rings.	15	4	32103 Piston rings.	15	4	30005 Piston rings.
16	1	32102 Piston pin.	16	1	32102 Piston pin.	16	1	16890 Piston pin.
2	32105	Bushings.	2	32105	Bushings.	2	16899	Bushings.
1	32634	Oil pan gasket, right.	1	32635	Oil pan gasket, right.	1	32635	Oil pan gasket, right.
1	32636	Oil pan gasket, left.	1	32637	Oil pan gasket, left.	1	32637	Oil pan gasket, left.
2	6x15	Cotter keys.	2	6x15	Cotter keys.	4	6x15	Cotter keys.
		1 gal. motor oil.			1 1/2 gal. motor oil.			1 1/2 gal. motor oil.
17	1	32102 Piston pin.	17	1	32102 Piston pin.	17	1	16890 Piston pin.
2	32105	Bushings.	2	32105	Bushings.	2	16899	Bushings.
2	6x15	Cotter keys.	2	6x15	Cotter keys.	4	6x15	Cotter keys.
18	1	32106 Connecting rod complete.	18	1	32106 Connecting rod complete.	18	1	16884 Connecting rod complete.
1	32102	Piston pin.	1	32102	Piston pin.	1	16890	Piston pin.
1	32634	Oil pan gasket, right.	1	32635	Oil pan gasket, right.	1	32635	Oil pan gasket, right.
1	32636	Oil pan gasket, left.	1	32637	Oil pan gasket, left.	1	32637	Oil pan gasket, left.
2	6x15	Cotter keys.	2	6x15	Cotter keys.	4	6x15	Cotter keys.
		1 gal. motor oil.			1 1/2 gal. motor oil.			1 1/2 gal. motor oil.
19	1	32106 Connecting rod complete.	19	1	32106 Connecting rod complete.	19	1	16884 Connecting rod complete.
1	32102	Piston pin.	1	32102	Piston pin.	1	16890	Piston pin.
2	6x15	Cotter keys.	2	6x15	Cotter keys.	4	6x15	Cotter keys.
20	1	32634 Oil pan gasket, right.	20	1	32635 Oil pan gasket, right.	20	1	32635 Oil pan gasket, right.
1	32636	Oil pan gasket, left.	1	32637	Oil pan gasket, left.	1	32637	Oil pan gasket, left.
8	6x15	Cotter keys.	24	6x15	Cotter keys.	24	6x15	Cotter keys.
		1 gal. motor oil.			1 1/2 gal. motor oil.			1 1/2 gal. motor oil.
21	1	32634 Oil pan gasket, right.	21	1	32635 Oil pan gasket, right.	21	1	32635 Oil pan gasket, right.
1	32636	Oil pan gasket, left.	1	32637	Oil pan gasket, left.	1	32637	Oil pan gasket, left.
16	6x15	Cotter keys.	24	6x15	Cotter keys.	24	6x15	Cotter keys.
		1 gal. motor oil.			1 1/2 gal. motor oil.			1 1/2 gal. motor oil.
22	1	16918 Motor gear case cover.	22	1	16918 Motor gear case cover.	22	1	16918 Motor gear case cover.
1	16919	Motor gear case cover gasket.	1	16919	Motor gear case cover gasket.	1	16919	Motor gear case cover gasket.
1	17408	Radiator inlet hose.	1	32716	Radiator inlet hose.	1	17408	Radiator inlet hose.
1	16922	Gear cover small gasket.	1	16922	Gear cover small gasket.	1	16922	Gear cover small gasket.
23	1	16726 Cam shaft gear.	23	1	16726 Cam shaft gear.	23	1	16726 Cam shaft gear.
1	16919	Motor gear case cover gasket.	1	16919	Motor gear case cover gasket.	1	16919	Motor gear case cover gasket.
1	16922	Gear cover small gasket.	1	16922	Gear cover small gasket.	1	16922	Gear cover small gasket.
1	17408	Radiator inlet hose.	1	32716	Radiator inlet hose.	1	17408	Radiator inlet hose.
24	1	16705 Crankshaft gear.	24	1	16705 Crankshaft gear.	24	1	16705 Crankshaft gear.
1	16919	Motor gear case cover gasket.	1	16919	Motor gear case cover gasket.	1	16919	Motor gear case cover gasket.
1	16922	Gear cover small gasket.	1	16922	Gear cover small gasket.	1	16922	Gear cover small gasket.
1	17408	Radiator inlet hose.	1	32716	Radiator inlet hose.	1	17408	Radiator inlet hose.
25	1	32609 Cam shaft front bearing.	25	1	32609 Cam shaft front bearing.	25	1	32609 Cam shaft front bearing.
1	16919	Motor gear case cover gasket.	1	16919	Motor gear case cover gasket.	1	16919	Motor gear case cover gasket.
1	16922	Gear cover small gasket.	1	16922	Gear cover small gasket.	1	16922	Gear cover small gasket.
1	17408	Radiator inlet hose.	1	32716	Radiator inlet hose.	1	17408	Radiator inlet hose.

List of Parts for Single Operations

Operation No.	Quantity	Part No.	SERIES 19 FOUR Name of Parts	Operation No.	Quantity	Part No.	SERIES 19-20 LIGHT & SPECIAL SIX Name of Parts	Operation No.	Quantity	Part No.	SERIES 19-20 BIG SIX Name of Parts
Group N—Continued				Group N—Continued				Group N—Continued			
25	1	12027	Cam shaft thrust washer.	25	1	12027	Cam shaft thrust washer.	25	1	12027	Cam shaft thrust washer.
26	1	32878	Cam shaft.	26	1	32879	Cam shaft.	26	1	32879	Cam shaft.
	1	16919	Motor gear case cover gasket.		1	16919	Motor gear case cover gasket.		1	16919	Motor gear case cover gasket.
	1	16922	Gear cover small gasket.		1	16922	Gear cover small gasket.		1	16922	Gear cover small gasket.
	1	17408	Radiator inlet hose.		1	32716	Radiator inlet hose.		1	17408	Radiator inlet hose.
	1	12027	Cam shaft thrust washer.		1	12027	Cam shaft thrust washer.		1	12027	Cam shaft thrust washer.
27			1 gal. motor oil.	27			1½ gal. motor oil.	27			1½ gal. motor oil.
28	1	10000	Valve spring.	28	1	10000	Valve spring.	28	1	10000	Valve spring.
	1	1520	Valve cap gasket.		1	1520	Valve cap gasket (Lt. Six only).				
29	1	10000	Valve spring.	29	1	10000	Valve spring.	29	1	10000	Valve spring.
	1	1520	Valve cap gasket.		1	1520	Valve cap gasket (Lt. Six only).				
30	1	16727	Valve guide.	30	1	16727	Valve guide.	30	1	16727	Valve guide.
	1	1520	Valve cap gasket.		1	1520	Valve cap gasket (Lt. Six only).				
31	1	16727	Valve guide.	31	1	16727	Valve guide.	31	1	16727	Valve guide.
	1	1520	Valve cap gasket.		1	1520	Valve cap gasket (Lt. Six only).				
32	1	36017	Cylinder assembly.	32	1	36019	Cylinder Assembly (Lt. Six).	32	1	36018	Cylinder assembly.
					1	39043	Cylinder Assembly (Sp. Six).				
	8	1520	Valve cap gaskets.		12	1520	Valve cap gaskets (Lt. Six only).				
	1	16893	Cylinder gasket.		1	17416	Cylinder gasket.		1	17416	Cylinder gasket.
	1	36235	Radiator outlet hose.		1	36235	Radiator outlet hose.		1	36235	Radiator outlet hose.
	8	6x15	Cotter keys.		12	6x15	Cotter keys.		24	6x15	Cotter keys.
	1	32634	Oil pan gasket, right.		1	32635	Oil pan gasket, right.		1	32635	Oil pan gasket, right.
	1	32636	Oil pan gasket, left.		1	32637	Oil pan gasket, left.		1	32637	Oil pan gasket, left.
			1 gal. motor oil.				1½ gal. motor oil.				1½ gal. motor oil.
33	1	32163	Crank shaft.	33	1	32164	Crank shaft.	33	1	32164	Crank shaft.
	1	32634	Oil pan gasket, right.		1	32635	Oil pan gasket, right.		1	32635	Oil pan gasket, right.
	1	32636	Oil pan gasket, left.		1	32637	Oil pan gasket, left.		1	32637	Oil pan gasket, left.
	20	6x15	Cotter keys.		40	6x15	Cotter keys.		40	6x15	Cotter keys.
			1 gal. motor oil.				1½ gal. motor oil.				1½ gal. motor oil.
34	1	32166	Rear lower bearing with cap.	34	1	32166	Rear lower bearing with cap.	34	1	32166	Rear lower bearing with cap.
	1	32169	Rear upper bearing with cap.		1	32169	Rear upper bearing with cap.		1	32169	Rear upper bearing with cap.
	1	32634	Oil pan gasket, right.		1	32635	Oil pan gasket, right.		1	32635	Oil pan gasket, right.
	1	32636	Oil pan gasket, left.		1	32637	Oil pan gasket, left.		1	32637	Oil pan gasket, left.
	8	6x13	Cotter keys.		12	6x13	Cotter keys.		12	6x13	Cotter keys.
	12	6x15	Cotter keys.		16	6x15	Cotter keys.		28	6x15	Cotter keys.
			1 gal. motor oil.				1½ gal. motor oil.				1½ gal. motor oil.
35	1	16907	Front lower bearing.	35	1	16907	Front lower bearing.	35	1	16907	Front lower bearing.
	1	32165	Front upper bearing.		1	32165	Front upper bearing.		1	32165	Front upper bearing.
	1	32634	Oil pan gasket, right.		1	32635	Oil pan gasket, right.		1	32635	Oil pan gasket, right.
	1	32636	Oil pan gasket, left.		1	32637	Oil pan gasket, left.		1	32637	Oil pan gasket, left.
	8	6x13	Cotter keys.		12	6x13	Cotter keys.		12	6x13	Cotter keys.
	12	6x15	Cotter keys.		16	6x15	Cotter keys.		28	6x15	Cotter keys.
			1 gal. motor oil.				1½ gal. motor oil.				1½ gal. motor oil.
36	1	16910	Center lower brg.	36	2	16910	Center and rear center lower brg.	36	2	16910	Center and rear center lower brg.
	1	17636	Center upper brg.		2	17636	Center and rear center upper brg.		2	17636	Center and rear center upper brg.
	1	32634	Oil pan gasket, right.		1	32635	Oil pan gasket, right.		1	32635	Oil pan gasket, right.
	1	32636	Oil pan gasket, left.		1	32637	Oil pan gasket, left.		1	32637	Oil pan gasket, left.
	8	6x13	Cotter keys.		12	6x13	Cotter keys.		12	6x13	Cotter keys.
	12	6x15	Cotter keys.		16	6x15	Cotter keys.		28	6x15	Cotter keys.
			1 gal. motor oil.				1½ gal. motor oil.				1½ gal. motor oil.
37	1	36020	Crank case complete with bearings.	37	1	36021	Crank case complete with bearings.	37	1	36021	Crank case complete with bearings.
	1	32634	Oil pan gasket, right.		1	32635	Oil pan gasket, right.		1	32635	Oil pan gasket, right.
	1	32636	Oil pan gasket, left.		1	32637	Oil pan gasket, left.		1	32637	Oil pan gasket, left.
	1	16893	Cylinder gasket.		1	17416	Cylinder gasket.		1	17416	Cylinder gasket.
	1	16919	Motor gear case cover gasket.		1	16919	Motor gear case cover gasket.		1	16919	Motor gear case cover gasket.
	1	36235	Radiator outlet hose.		1	36235	Radiator outlet hose.		1	36235	Radiator outlet hose.
	8	6x13	Cotter keys.		12	6x13	Cotter keys.		12	6x13	Cotter keys.
	12	6x15	Cotter keys.		16	6x15	Cotter keys.		28	6x15	Cotter keys.
			1 gal. motor oil.				1½ gal. motor oil.				1½ gal. motor oil.
38	1	32634	Oil pan gasket, right.	38	1	32635	Oil pan gasket, right.	38	1	32635	Oil pan gasket, right.
	1	32636	Oil pan gasket, left.		1	32637	Oil pan gasket, left.		1	32637	Oil pan gasket, left.
	8	6x13	Cotter keys.		12	6x13	Cotter keys.		12	6x13	Cotter keys.
	12	6x15	Cotter keys.		16	6x15	Cotter keys.		28	6x15	Cotter keys.
			1 gal. motor oil.				1½ gal. motor oil.				1½ gal. motor oil.
39	1	32177	Fly wheel.	39	1	30601	Fly wheel.	39	1	30601	Fly wheel.
	2	18366	Fly wheel bolts.		2	18366	Fly wheel bolts.		2	18366	Fly wheel bolts.
	4	6x15	Cotter keys.		4	6x15	Cotter keys.		4	6x15	Cotter keys.
40	1	16910	Center and lower brg.	40	2	16910	Center and rear center lower brg.	40	1	16910	Center and rear center lower brg.
	1	32634	Oil pan gasket, right.		1	32635	Oil pan gasket, right.		1	32635	Oil pan gasket, right.
	1	32636	Oil pan gasket, left.		1	32637	Oil pan gasket, left.		1	32637	Oil pan gasket, left.
	4	6x13	Cotter keys.		4	6x13	Cotter keys.		4	6x13	Cotter keys.
			1 gal. motor oil.				1½ gal. motor oil.				1½ gal. motor oil.
Group O				Group O				Group O			
1	1	32487	Muffler complete.	1	1	32487	Muffler complete.	1	1	32487	Muffler complete.
2	1	32488	Muffler front head.	2	1	32488	Muffler front head.	2	1	32488	Muffler front head.
3	1	32489	Muffler rear head.	3	1	32489	Muffler rear head.	3	1	32489	Muffler rear head.

List of Parts for Single Operations

Operation No.	Quantity	Part No.	SERIES 19 FOUR Name of Parts	Operation No.	Quantity	Part No.	SERIES 19-20 LIGHT & SPECIAL SIX Name of Parts	Operation No.	Quantity	Part No.	SERIES 19-20 BIG SIX Name of Parts
Group P				Group P				Group P			
1	1	30669	Oil pressure gauge.	1	1	32703	Oil pressure gauge.	1	1	30669	Oil pressure gauge.
2	1	24231	Oil pump body gasket.	2	1	24231	Oil pump body gasket.	2	1	24231	Oil pump body gasket.
	1	24534	Oil pump complete.		1	24534	Oil pump complete.		1	24534	Oil pump complete.
3	1	16944	Oil pump drive gear.	3	1	16944	Oil pump drive gear.	3	1	16944	Oil pump drive gear.
	1	16946	Oil pump idler gear.		1	16946	Oil pump idler gear.		1	16946	Oil pump idler gear.
	1	16945	Oil pump drive shaft.		1	16945	Oil pump drive shaft.		1	16945	Oil pump drive shaft.
	1	24231	Oil pump body gasket.		1	24231	Oil pump body gasket.		1	24231	Oil pump body gasket.
	1	24233	Oil pump cover gasket.		1	24233	Oil pump cover gasket.		1	24233	Oil pump cover gasket.
4	1	24131	Oil pump body gasket.	4	1	24231	Oil pump body gasket.	4	1	24231	Oil pump body gasket.
5	1	32781	Oil distributor pipe.	5	1	32782	Oil distributor pipe.	5	1	32782	Oil distributor pipe.
	1	24231	Oil pump body gasket.		1	24231	Oil pump body gasket.		1	24231	Oil pump body gasket.
6	1	24231	Oil pump body gasket.	6	1	24231	Oil pump body gasket.	6	1	24231	Oil pump body gasket.
	1	32634	Oil pan gasket, right.		1	32635	Oil pan gasket, right.		1	32635	Oil pan gasket, right.
	1	32636	Oil pan gasket, left.		1	32637	Oil pan gasket, left.		1	32637	Oil pan gasket, left.
			1 gal. motor oil.				1½ gal. motor oil.				1½ gal. motor oil.
7	1	24508	Motor gear case cover ring.	7	1	24508	Motor gear case cover ring.	7	1	24508	Motor gear case cover ring.
	1	16919	Motor gear case cover gasket.		1	16919	Motor gear case cover gasket.		1	16919	Motor gear case cover gasket.
	1	16921	Motor gear case upper gasket.		1	16921	Motor gear case upper gasket.		1	16921	Motor gear case upper gasket.
	1	31819	Radiator outlet hose.		1	31819	Radiator outlet hose.		1	31819	Radiator outlet hose.
8	1	32634	Oil pan gasket, right.	8	1	32635	Oil pan gasket, right.	8	1	32635	Oil pan gasket, right.
	1	32636	Oil pan gasket, left.		1	32637	Oil pan gasket, left.		1	32637	Oil pan gasket, left.
			1 gal. motor oil.				1½ gal. motor oil.				1½ gal. motor oil.
9	1	35239	Oil pressure pipe.	9	1	35238	Oil pressure pipe.	9	1	35238	Oil pressure pipe.
10	1	32551	Oil float.	10	1	32551	Oil float.	10	1	32551	Oil float.
	1	32548	Oil float stem guide flange gasket.		1	32548	Oil float stem guide flange gasket.		1	32548	Oil float stem guide flange gasket.
11	1	32559	Oil pan strainer base gasket.	11	1	32559	Oil pan strainer base gasket.	11	1	32559	Oil pan strainer base gasket.
12	1	32555	Oil pan screen.	12	1	32555	Oil pan screen.	12	1	32555	Oil pan screen.
	1	32559	Oil pan strainer base gasket.		1	32559	Oil pan strainer base gasket.		1	32559	Oil pan strainer base gasket.
Group Q				Group Q				Group Q			
1	4	32205	Universal joint cross bushing.	1	4	32210	Universal joint cross bushing.	1	4	32210	Universal joint cross bushing.
	4	32214	Universal joint cross bushing lock wire.		4	32217	Universal joint cross bushing lock wire.		4	32217	Universal joint cross bushing lock wire.
	1	32218	Universal joint yoke dust washer.		1	32219	Universal joint yoke dust washer.		1	32219	Universal joint yoke dust washer.
2	4	32205	Universal joint cross bushing.	2	4	32210	Universal joint cross bushing.	2	4	32210	Universal joint cross bushing.
	4	32214	Universal joint cross bushing lock wire.		4	32217	Universal joint cross bushing lock wire.		4	32217	Universal joint cross bushing lock wire.
	1	32218	Universal joint yoke dust washer.		1	32219	Universal joint yoke dust washer.		1	32219	Universal joint yoke dust washer.
3	1	32203	Universal joint cross.	3	1	32204	Universal joint cross.	3	1	32204	Universal joint cross.
	4	32214	Lock wires.		4	32217	Lock wires.		4	32217	Lock wires.
	1	32218	Universal joint yoke dust washer.		1	32219	Universal joint yoke dust washer.		1	32219	Universal joint yoke dust washer.
	1	32269	Front universal joint yoke.		4	32270	Front universal joint yoke.		4	32270	Front universal joint yoke.
	4	32214	Lock wires.		4	32217	Lock wires.		4	32217	Lock wires.
	1	32218	Universal joint yoke dust washer.		1	32219	Universal joint yoke dust washer.		1	32219	Universal joint yoke dust washer.
5	1	32535	Propeller shaft with rear yoke.	5	1	32537	Propeller shaft with rear yoke.	5	1	32536	Propeller shaft with rear yoke.
	4	32214	Lock wires.		4	32217	Lock wires.		4	32217	Lock wires.
	1	32218	Universal joint yoke dust washer.		1	32219	Universal joint yoke dust washer.		1	32219	Universal joint yoke dust washer.
6	1	32203	Universal joint cross.	6	1	32204	Universal joint cross.	6	1	32204	Universal joint cross.
	4	32205	Universal joint cross bushing.		4	32210	Universal joint cross bushing.		4	32210	Universal joint cross bushing.
	4	32214	Lock wires.		4	32217	Lock wires.		4	32217	Lock wires.
	1	32218	Universal joint yoke dust washer.		1	32219	Universal joint yoke dust washer.		1	32219	Universal joint yoke dust washer.
7	1	32203	Universal joint cross.	7	1	32204	Universal joint cross.	7	1	32204	Universal joint cross.
	4	32205	Universal joint cross bushing.		4	32210	Universal joint cross bushing.		4	32210	Universal joint cross bushing.
	4	32214	Lock wires.		4	32217	Lock wires.		4	32217	Lock wires.
	1	32218	Universal joint yoke dust washer.		1	32219	Universal joint yoke dust washer.		1	32219	Universal joint yoke dust washer.
8	2	32203	Universal joint cross.	8	2	32204	Universal joint cross.	8	2	32204	Universal joint cross.
	8	32205	Universal joint cross bushing.		8	32210	Universal joint cross bushing.		8	32210	Universal joint cross bushing.
	8	32214	Lock wires.		8	32217	Lock wires.		8	32217	Lock wires.
	2	32218	Universal joint yoke dust washer.		2	32219	Universal joint yoke dust washer.		2	32219	Universal joint yoke dust washer.
9	1	32238	Universal joint yoke outer casing.	9	1	32239	Universal joint yoke outer casing.	9	1	32239	Universal joint yoke outer casing.
	1	32218	Universal joint yoke dust washer.		1	32219	Universal joint yoke dust washer.		1	32219	Universal joint yoke dust washer.
10	1	32241	Universal joint yoke inner casing.	10	1	32266	Universal joint yoke inner casing.	10	1	32266	Universal joint yoke inner casing.
	1	32218	Universal joint yoke dust washer.		1	32219	Universal joint yoke dust washer.		1	32219	Universal joint yoke dust washer.

(Continued in September 21 Issue)

STUDEBAKER FLAT RATE PLAN

Part I—Forms and Workings of the System appeared in the August 24 issue. Part II—Group Operations and Labor Time Appeared August 31. Part III—The List of Parts for Single Operations Started Last Week and Will Be Concluded Next Week. List of Parts for Combined Operations Will Appear September 28th.

THE LAW

By GEORGE F. KAISER

Perplexed?

Does some point of law perplex you?

Why don't you ask MOTOR WORLD's legal editor to discuss the question?

Dealer Can Show Readiness to Complete Contract

That the trial court erred in refusing to allow a dealer to show that he was ready, able and willing to carry out his part of a contract for sale of a motor car, in a suit to recover the purchase price brought by a customer, was the decision in *Roberts vs. Weber Motor Car Co.*, 232 S. W. (Missouri), pg. 224.

Suit was instituted to recover \$100 paid to the dealer as a deposit on a car. It appeared that the buyer received notice that the car was ready for delivery. He said that when he called he was informed that one of the lamps was broken, and defendant did not want to deliver it in that condition. He did not say that he ever afterwards made any request or demand for the car, or offered to pay the balance due. On the 24th of April, 1914, he received another letter, in which defendant called his attention to his contract to purchase the Studebaker car, and added:

"We have been ready to make this delivery for a long time, and write to know whether or not you will accept same by the end of the month."

Plaintiff said in response to this letter, or a similar letter, he called upon the company and saw a car there, and asked if it was his car, and was told that it had just been sold to another man. He stated, after being pressed by counsel, that if defendant, at the time he went there, had produced the car he had contracted to purchase, he was ready and willing to pay for it. On the 5th day of June following plaintiff again received a letter from defendant stating:

"We are somewhat disappointed over the fact that you have not made any effort to take out your new Studebaker Six, or call at our office, as you promised to make an adjustment on several claims which we have against you."

In response to that letter, plaintiff said he went out in company with his attorney, at which time he discussed with the defendant an aggregation of troubles, but there was no controversy at that time about the Studebaker touring car which he had contracted to purchase. He said he was afraid they might give him something he did not want, or had not contracted to buy. He also said he was disappointed about other transactions with the defendant and refused to take such a car even though the defendant had complied in every respect with the contract.

Edward Weber was then placed upon the witness stand by defendant, who

offered to prove that about December, 1912, the car was ready for delivery to plaintiff; that he was notified of that fact on that occasion and on numerous other occasions during the years 1913 and 1914; that plaintiff refused on one pretext and another to take the car, although the same was ready for delivery to him at any time that he saw fit to pay the balance of the purchase price thereon; that the defendant held such a car as was described in the contract, ready to deliver to plaintiff at all times since December, 1913, and is still ready, able and willing to deliver such car upon the payment of the balance of the purchase price. The court refused to allow the admission of this testimony. Other offers of proof were made, but upon objection being made the same was by the court sustained.

The Appellate Court held that it is reversible error where, as here, the court refused to permit defendant to introduce testimony tending to show that it had carried out in every way its part of the contract with respect to the purchase price of the Studebaker touring car. If plaintiff was ready, willing and able to carry out his terms of the contract, and defendant failed in the performance of its duties with respect thereto, then plaintiff would be entitled to a return of his money; but, on the other hand, if defendant was ready, willing and able to carry out its part of the contract, and plaintiff refused to carry out his part of the agreement, without just cause, he could not recover the amount which he seeks to recover in this case. (*Webb & Klinne v. Steiner*, 113 No. App. 482, 87, S. W. 618.) Therefore defendant should have been permitted to make proof of its just and proper defense which, according to the offer of proof, it had.

Garage Man Advised to Sell Car

Editor Motor World: We have a case before us where a man from Philadelphia had his Oldsmobile touring car wrecked in our vicinity. The car was towed to our garage and pending word from the insurance company he authorized us to make the necessary repairs according to the figures we made for the insurance company.

The job was completed and he was notified, and we find out that he has been paid by the insurance company in an amount which is about equal to the value of the car.

Will you advise us what steps we can take toward straightening this matter out?—G. C. G., Long Island.

Answer—Of course, in this State, you have a lien on the car for the amount of your charges until you give up possession of it or until your bill is paid. Assuming that the car is worth more than is due you for your work, labor, and services and materials furnished, there is nothing for you to worry about. Notify the owner to call for his car. If he fails to do so within a reasonable time have a local attorney arrange to sell the car for you under your claim of lien. Don't try to do this yourself, as it is a technical proceeding and the statute must be strictly followed.

Seeks to Collect Tire Bill

Editor Motor World: Would like to have some advice. A man buys a tire and tube and does not pay for same but promises to pay within a week and then fails to do so.

The car he has is not paid for, the party that sold same holds a note for it but the buyer is single and working.

Will you please advise by return mail how I must go about it to collect money for the tire and tube?—Subscriber, Ohio.

Answer: If the buyer is working on a salary you should have no trouble in collecting the amount due you though you may have to go to the trouble of suing him to collect if he will not pay voluntarily. Put your claim in the hands of some local lawyer and let him write the debtor a letter demanding payment. The debtor will pay more attention to such a letter if it is written by a lawyer than if you write it yourself, especially if you have already verbally demanded payment. He at least has an interest in the car which might be subject to an attachment. Your local adviser can tell you more about that than I can.

Driver's License for Mechanic Not Necessary

Editor Motor World: Would like to know if a mechanic working in a garage and who does not test cars on the road or test them out in any way has to have a chauffeur's license in Illinois.

What is the meaning of operating an automobile, and if a mechanic starting a motor in the shop would be considered operating a car.—S. G., Stockton, Ill.

Answer—A chauffeur's license is only required for a chauffeur, i.e., one who operates a car for hire on the public highway, etc.

Repairing or testing a car out in a repairshop cannot be held to be operating a car.

Repairshop Shortcuts

No. 3041—Die Holder for Spring Clips.—An extension to permit the use of a die in rethreading spring clips is made from short sections of pipe, one fitting inside the regular holder and the other fitting outside the die. The sections are riveted together. — W. B. Wheatley, Brooklyn, N. Y.

No. 3042—Overland Engine Tongs.—The tongs consist of two side pieces and a ring. The left side piece has a bend in both directions, as shown, to clear the intake manifold, and the dimensions are given on the mechanical drawing. — Henry M. Holt, Willys-Overland, Inc., New York City.

No. 3043—Flywheel Bar for Willys-Knight.—The bar consists of a piece of heavy round stock, upset near one end, drilled, and a starting motor pinion riveted on. The end is turned over to come under the flywheel rim, the gear engaging the teeth on the flywheel. — Henry M. Holt, Willys-Overland, Inc., New York City.

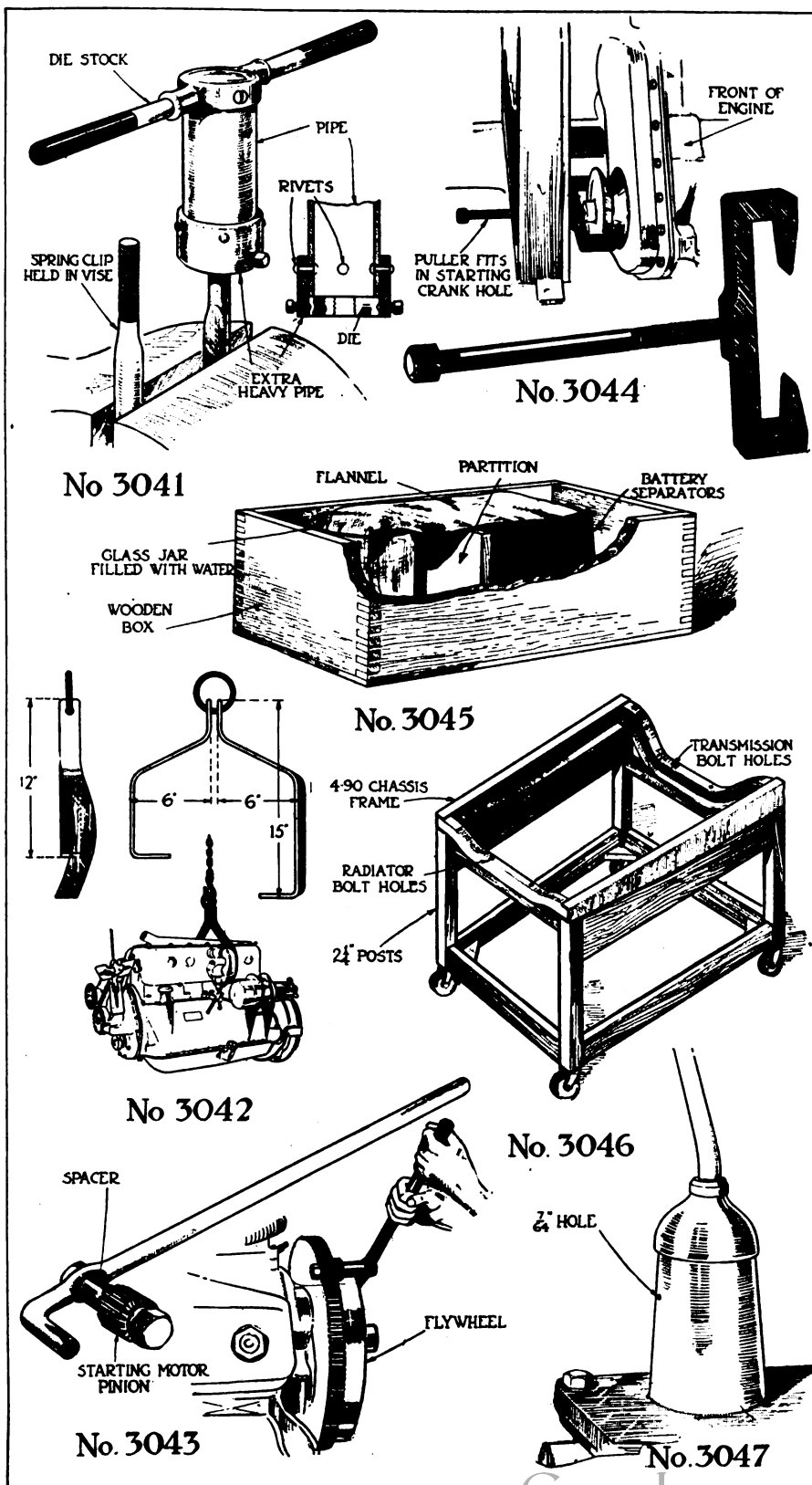
No. 3044—Puller for Chevrolet 490 Fan Belt Pulley.—The clamp is forged of heavy section material so as not to bend, and is drilled and tapped to take a long bolt which extends through the crank bearing so that it can be turned by a wrench from the outside. — Charles R. Simmons, Chevrolet Motor Co., New York City.

No. 3045—Battery Separator Moistener.—A wooden box is partitioned off, a glass jar filled with water being on one side and the separators on the other. A piece of flannel dips into the water, goes over the partition and covers the separators. The wick action keeps them moist. — P. C. Hawksford, Sparks Co. Electrical Service Station, Duncan, Vancouver Island, Canada.

No. 3046—Chevrolet Engine Stand.—The stand is made of a section of the Chevrolet frame mounted on a wooden frame with casters. Gearset and radiator holes are in the cross members. — Charles R. Simmons, Chevrolet Motor Co., New York City.

No. 3047—Air Vent for Gearset.—Drilling a small hole just below the gearshift lever makes an air vent to allow the grease to stay at the bottom of the gearset. — Billy Lawrence, Indianapolis.

SEND in a sketch and description of the device you doped out to make your work easier. Motor World will pay a dollar for every idea accepted for publication.



SCIENTIFIC CONSTRUCTION

GARAGES

SHOWROOMS

REPAIRSHOPS

Conducted by DONALD D. BLANCHARD

Side Driveway Preferable for Dealer Building

Impossible to Obtain Sufficient Frontage for Showroom with Center Driveway in a Narrow Building—Advantage of an Outside Ramp

THERE are two positions for the entrance driveway in a building 50 ft. wide. The center entrance is most commonly used, and in a building that is primarily a garage, it is more desirable. However, when the building is to be used by a car dealer, it is difficult to provide a suitable showroom if the center entrance is used. After allowance is made for the width of the driveway and the thickness of the walls, there are about 36 ft. left for the showroom. If this is divided in two by a center driveway, the maximum available width of the car showroom is 18 ft.

The side driveway allows the full width of 36 ft. to be used for the car sales-

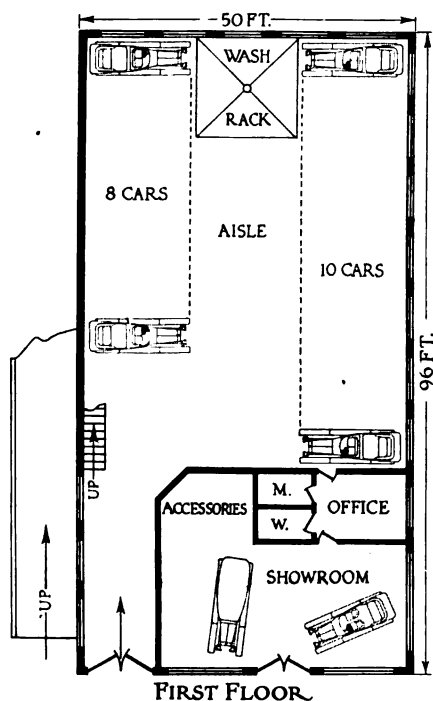
room. However, this construction interferes with the efficient use of the garage space at the rear of the building. Furthermore, it is not as convenient to get into the garage as with a center driveway.

In making the selection between the two, the dealer should weigh the advantages and disadvantages of each carefully. If it is felt that it is more important to have maximum storage capacity and convenience rather than a wide showroom, the center entrance is preferable. But if the sale of cars is an important element and the garage business a minor point, the side driveway should be selected.

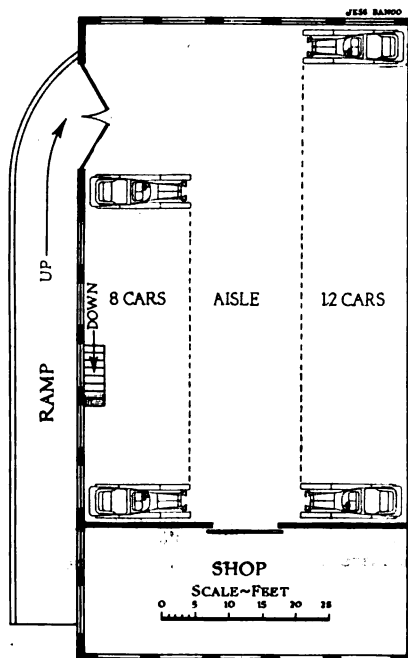
In the building, the plans for which

MOTOR WORLD is glad to receive and answer inquiries for garage plans, but in order that there may be as little delay as possible in submitting the plans desired it is imperative that the following information be given:

Size of plot, with rough sketch showing shape and its relation to adjoining plots; name and number of departments operated; number of cars to be shown in salesroom; number of cars in garage; any other pertinent details.



FIRST FLOOR



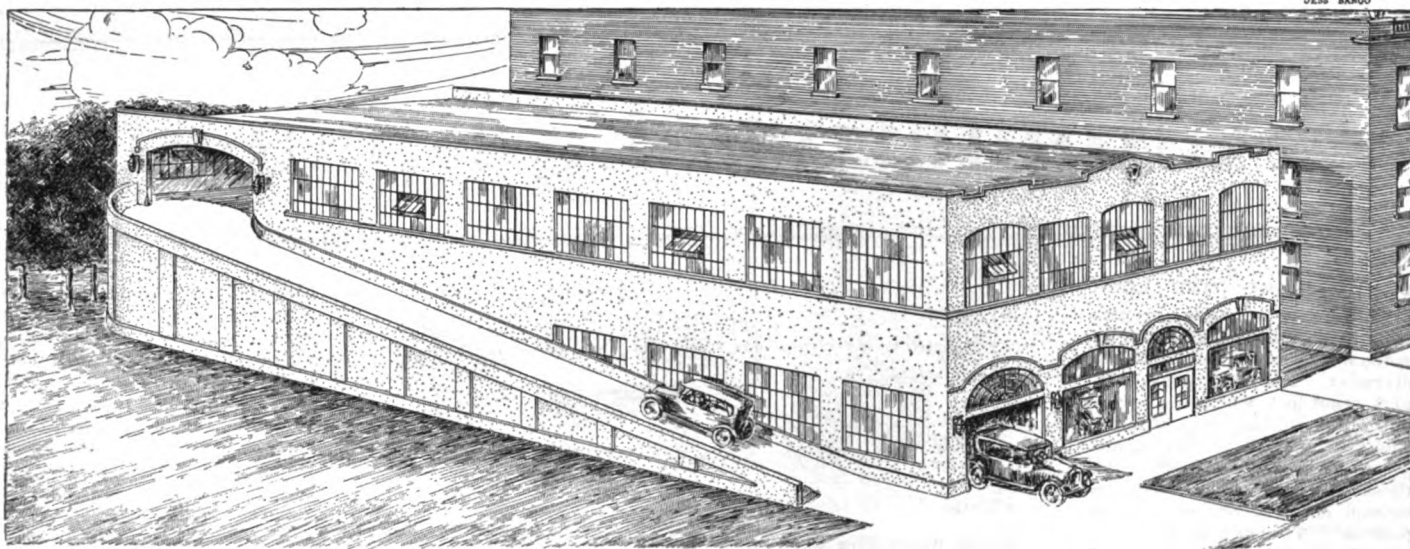
SECOND FLOOR

are shown on this page, the side driveway has been selected. The storage capacity of the first floor has been reduced by two cars as a result. The car showroom is large enough for the display of three cars of moderate size. Cars are run into it through the front door, the doorway having been made sufficiently wide to permit this. Accessory sales and display facilities are contained in a small alcove at the back of the salesroom.

Another feature of this building is the outside ramp. Where the space is available, this construction has several advantages. It is difficult to put a ramp into a 50 ft. building because of the short turning diameter off the ramp at the top. By placing it outside, the diameter is increased by about 10 ft. Another advantage is that all the space in the building is usable. If the width of the building is increased to include the ramp, the cost of the building will be greater because of the larger size, but the useful space would not be materially increased.

The shop is located on the second floor at the front. This is directly over the showroom, which is an objection, but it cannot be placed elsewhere on this floor without interfering with car storage.

Floor plans for a complete dealer building with side driveway and outside ramp



This sketch gives a general idea of the exterior appearance of the building discussed on the opposite page

Making Better Truck Salesmen

“THE truck industry needs better selling methods—better salesmanship.” This seems to be a recognized fact in all branches of the industry.

The truck dealer needs good salesmen. He should know whether they are using all of the selling ammunition provided for them by the factory and by yourself.

Do you sell trucks at your sales conferences, and in this way get the salesmen to perform under your observation so that you may observe their strong and weak points in presenting your product?

The Katz Motor Car Co., Paterson, N. J., which has been particularly successful in selling White trucks in the northern New Jersey territory, uses a periodic examination to drive home to the salesmen some of the salient talking points in selling White trucks. These examinations, which are practically identical, are given once every three months or so, and the repetition has proved very effective in driving home the things the Katz Motor Car Co. wants its salesmen to talk about when selling.

In the questions that will follow it will be noted there are no technical or mechanical questions, and the reason for this is that the company does not use arguments on mechanical construction in selling White trucks. All effort is put on the satisfied owner idea.

Probably these questions suggest an examination that other truck dealers might hold occasionally to test the knowledge of their salesmen concerning their own lines.

The A B C of Selling White Trucks

“A”—1. Give name of each concern with 100 or more Whites. 2. Give argument relative to four departments necessary to satisfy that Whites do the most work for the least money. 3. Why is the Roll Call valuable as a sales argument.

“B”—1. What is the argument in favor of White trucks based on the two middle pages of the First book?

“C”—1. What trucks are shown on the

middle page of 100,000 Miles? 2. Whose letter appears on page 12 of 100,000 Miles and what does the letter say?

“D”—1. Whose truck is shown at the bottom of page 5 of Department Stores book and page 5 in Contract Hauling book? 2. What does Isaac Noonberg say of Whites and where does his letter appear?

“E”—1. Name all owners of 5-ton Whites with Metropolitan bodies.

“F”—1. Name White owners in Paterson using 5-ton trucks in the trucking business. 2. Name White owners in Paterson using 2-ton trucks in the trucking business. 3. Name White owners in Paterson using 2-ton trucks in the silk business.

“G”—1. Name 2-ton owners in Bergen County. 2. In what territory are Appert and E. J. Lotz?

“H”—1. Have we a letter from Geo. Herrmann? 2. What does Jos. Bernstein say

about service? 3. What is the last paragraph in the Garfield Passaic Transit Company's letter? 4. What is the big point in the Union P. Dye Company's letter?

“I”—1. What is service as we understand it? 2. What do we propose to furnish in paragraph regarding inspections for first year?

“J”—1. Purposes, advantages and result of report?

“K”—1. When did you last see.....? 2. How many trucks has and name makes. 3. Why can't you sell?

“L”—1. Price of $\frac{3}{4}$ -ton with cord tires. 2. Price of 2-ton. with Sewell wheels. 3. Price of our used 5-ton Saurer. 4. What is the cost of 2-ton White with wood holst and steel body?

“M”—1. What are the advantages of our finance plan?

Making the Most of a Corner

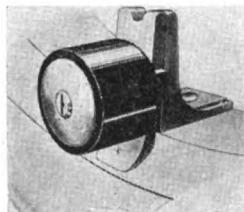


Many of the advantages of a corner location are secured in this building by placing the entrance to the service department at the rear of the showroom. Because of the windows along the sides a splendid view of the interior of the salesroom is available from the street. This building is the new home of John E. Smith, Buick dealer in Atlanta, Ga.

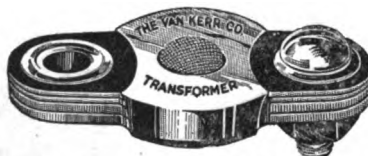
Automotive Equipment

OAKES SPARE TIRE LOCK

This lock is made of two parts, a barrel-shaped casting of malleable iron about 2 in. in diameter, and a high-grade, pick-proof lock which fits in the outer end of the lock housing. The rear end of the casting has a center hole through which the threaded stud found at the bottom of most tire carriers is passed. The nut is then replaced on the stud inside of the lock housing and screwed tight. The lock itself is then replaced and the tire is absolutely protected against theft. The housing is finished in black enamel and the lock face is nickel-plated. Each lock is furnished with two keys. The locks are manufactured in four standard types with special model for Fords. Price \$5.—Oakes Co., Indianapolis, Ind.



Oakes Spare Tire Lock



Van Kerr Transformers

ture to the terminal through a flexible shunt, which eliminates the usual path through a series of high resistance connections. The device is adjusted by bending the brass stop until the cut-out closes at the correct voltage.—Westinghouse Electric Co., East Pittsburgh, Pa.

VAN KERR TRANSFORMERS

This is a spark intensifying device. Prices are as follows: Set for four-cylinder engine, \$2; for six-cylinder engine, \$2.50; for eight-cylinder engine, \$3.50, and for twelve-cylinder engine, \$5.—Van Kerr Co., 3160 North Clark Street, Chicago.

GASKO CEMENT

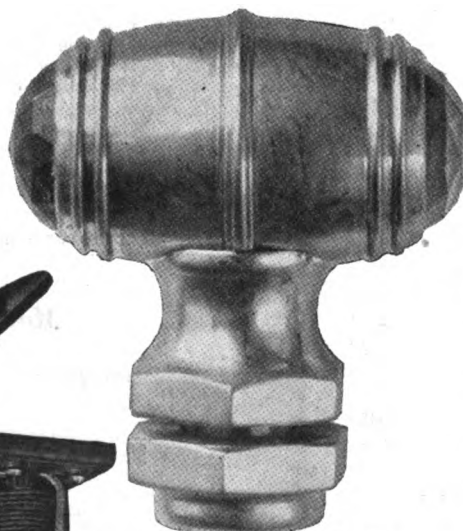
A gasket cement for gaskets in automobile engines. It is sold in tubes. Price 50 cents.—Van Sicke Mfg. Co., Lincoln, Neb.

MOTOLOK FOR REOS

This device replaces the ignition switch on the steering column housing on Reo cars, and the battery and magneto circuits are operated directly with the Yale key which is removable in the off position only. The cover is locked to the switch base by means of an extension attached to the plug of the cylinder lock and it is impossible to remove the cover from the base after the two cover screws are withdrawn, unless the key is inserted in the lock and turned to the battery position which will immediately release the cover from the switch base. The lock is finished in black enamel, with nickel trimmings, and is 3 1/4" in diameter. Two keys are furnished. The lock is approved by the Underwriter's Laboratories. Price \$5.—Cox Mfg. Co., Cleveland, Ohio.



Motolok for Reos



Elm City Terminal Outfit

ELM CITY TERMINAL OUTFIT

The outfit consists of one thousand brass eyelets and an eight-inch nickel-plated punch. In using this device the insulation is first removed from the wire, the ignition cable is split and the wire is twisted around the eyelet and secured in position with the punch. Price \$3.—C. S. Mersick & Co., 274 State Street, New Haven, Conn.

ACME PARKING LAMP

This parking lamp is made of solid brass and is complete with fender bolts, gasket and dash switch. It is easily opened with a screw driver. The lenses are 2 1/2 in. in diameter and are of the no glare type. Prices—black enamel finish \$2.50, nickel finish \$3, colors \$3.—Auto Specialty Co., 201 North Broad Street, Philadelphia, Pa.



New Westinghouse Cut-out

NEW WESTINGHOUSE CUT-OUT

The cut-out consists of a U-shaped strap frame which is mounted on a pressed steel base. The central core carries two windings, a shunt or voltage coil and a series or current coil. On one leg of the frame is mounted an insulated bracket which supports the stationary contact. The other leg of the frame carries the armature to which is secured the movable contact. The armature flexes on a phosphor bronze hinge and is normally held against the stop by the steel spring so the contacts are separated. Current is carried from the movable arma-



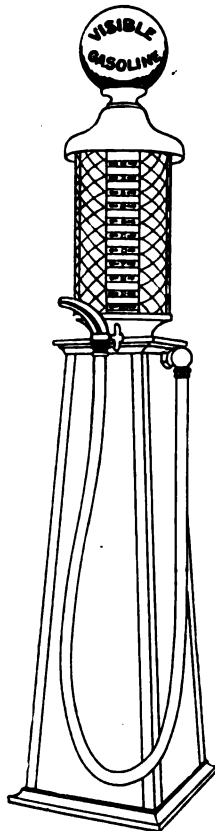
Steer-A-Tractor

STEER-A-TRACTOR

A device for controlling the tractor from the seat of the implement. The tractor steering wheel fits on this attachment. The throttle is controlled by a rod and the clutch is controlled by a lever which locks automatically when pulled out and is released by a further slight pull on the lever. This clutch control is also useful when the tractor is used for belt work. Made for Fordson and Samson tractors. Price—\$25. Sella Mfg. Co., Des Moines, Iowa.

WICHITA VISIBLE GASOLINE DISPENSER

This pump is provided with a gasoline meter which is constructed so that it only registers when gasoline is going through the hose. The glass cylinder is inspected carefully for correct measurement. If the cylinder is broken the pump can be continued in operation by the installation of a special attachment. The nozzle is provided with a shut-off valve which can be operated with one hand. These pumps are built in either the air lift or hand operated type and in capacities of five, ten and fifteen gallons.—Hayes Equipment Co., Wichita, Kan.



Wichita Visible Gasoline Dispenser

GENERAL STORAGE BATTERY FOR FORDS

This is a special model of General Storage Battery which has been especially designed for use in the Ford car. It is identical in construction and quality with other types of storage battery manufactured by this company. Price \$25, including tax.—General Storage Battery Co., 2005 Locust Street, St. Louis, Mo.

HODGES NON-SKID TIRE CHAINS

These chains are manufactured with single unit interchangeable, interlocking, drop-forged links. Each link is interchangeable without the use of tools. They are made in all sizes from 30 x 3½ in. up to 37 x 5 in. Prices vary from \$8.50 up to \$17. Cross chains are also supplied separately.—Hodges Chain Co., 2721 South Michigan Avenue, Chicago.



Hodges Non-Skid Tire Chains

SMOOTH-ON IRON CEMENT No. 1

This cement will repair leaks in both tubular and honeycomb type radiators. The cement is mixed with water and packed around the leak. Prices, 6 oz. can, 30 cents; 1 lb. can, 50 cents.—Smooth-On Mfg. Co., Jersey City, N. J.

NEW HEADLIGHT FOCUSING DEVICE

This consists of a circular piece of cardboard of about the size of the lamp. In about the middle of this board two small holes are stamped out. Printed instructions for the use of the device are printed on the cardboard. It will be sent free on request by the Warner-Patterson Co., 914 South Michigan Avenue, Chicago, Ill.



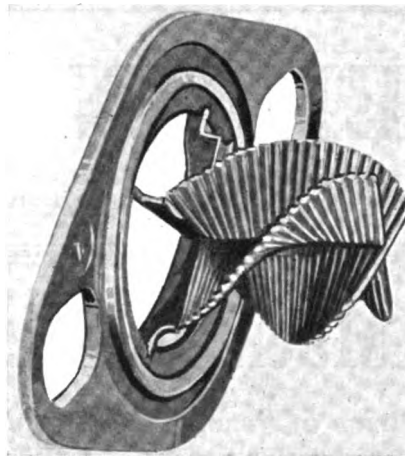
New Headlight Focusing Device

THE SURE FIRE SPARK PLUG

This plug is sold with a three year guarantee. It is made in two pieces, the upper portion of the insulator is a clay compound and the lower portion is mica. The finish is nickel and the electrodes are made of nickel steel. Price \$1.00 each.—Raymond Fontaine, 100 Osborn Avenue, New Haven, Conn.



Sure Fire Spark Plug



Multipower Friction Gas Distributor



Glownite Auto Watch

MULTIPOWER FRICTION GAS DISTRIBUTOR

The purpose for which this device is designed is to produce finer atomization of the mixture. The device consists of a double spiral made of brass which is inserted in the intake manifold next to the carburetor. The spiral is attached to a special gasket which eliminates the necessity of other packing. The spiral is corrugated to further churn up the gas. Price \$1.50.—The Multipower Co., 910 North Marshfield Avenue, Chicago, Ill.

GLOWNITE AUTO WATCH

The watch is attached to the instrument board by means of a simplified frame with a flange which makes it unnecessary to cut a large circular hole. It is simply necessary to drill three holes to accommodate the screws. It is supplied with a hinge cover so that the watch may be removed easily, or with a special cover which cannot be removed without tools. The figures and hands are luminous. Price, \$4 each.—J. F. Mansfield, 9 Maiden Lane, New York City.

WHISTLER HOSE ASSEMBLY TIRE GAGE

On one end of this hose there is a whistler safety gage which can be set at any desired pressure. When this pressure is exceeded the gage whistles. A Lox-On Junior chuck is provided on the other end of the hose. This hose is said to be especially useful in inflating tires on disk and wire wheels. Price, \$2.25 each.—The Automobile Device Co., 1104 Union National Bank Bldg., Cleveland, Ohio.



Whistler Hose Assembly Tire Gage

K-E-M TERMINALS

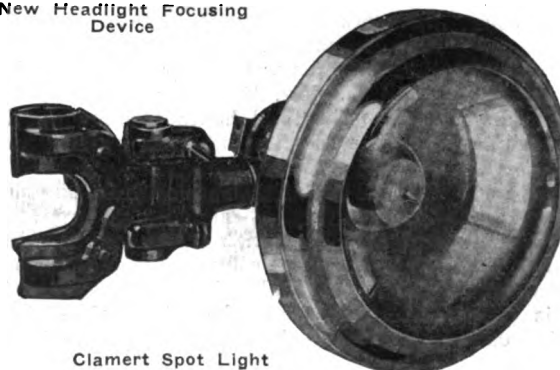
The feature of this terminal is that no solder is required in making the connection. It consists of two parts, which are screwed together. One part attaches to the spark plug terminal and the other is arranged so that the wire in the cable may be pulled through it, divided and twisted around a tapered lug. Price, 10 cents.—K-E-M, Inc., 474 Sterling Place, Brooklyn, N. Y.



K-E-M Terminals

CLAMERT SPOT LIGHT

The feature of this light is the glass reflector which it is said will not rust or corrode and cannot be scratched or dented. It has an outside focusing adjustment. All parts can be replaced without the use of rivets or solder and all screws are standard. The bracket is said to fit 80% of the present day cars. The lamp is removable from the bracket so that it may be used as a trouble lamp. It is equipped with a 27 c. p. Mazda frosted tip bulb. Price \$5.—Clamert Manufacturing Co., Latrobe, Pa.



Clamert Spot Light

SYSTEM IN BUSINESS

This Department Is Intended to Assist Motor World Readers in Working Out Their System Problems—It Will Answer Questions Concerning System and Accounting

How Much Does Service Cost?

Selling Price of Service Must Be Based on Costs—Service Cost Accounting Methods of New York Dealer Explained

THE price at which service is sold should be determined by the cost of rendering that service. In order to sell service at a price that is fair both to the owner and the dealer, the service department must have a good system of cost accounting. It doesn't pay to guess at the cost, add a profit and call the total the selling price. Some day a customer is going to kick about his bill, and how is he to be answered if the charges on his bill are unsupported guesses? Or some day you will wake up to find that your service department is losing money because you are selling service at less than cost. This story tells how to get the facts about the cost of service. It tells how the Manhattan Motor Corp., Selden dealer in New York City, does it.

The first step is to inspect the truck to determine what repairs and adjustments are necessary. The order clerk then fills out the repair order in quadruplicate. The reverse side of the original or white copy is arranged to facilitate the work of the cost department in computing cost and sales prices. The yellow copy goes to the truck owner and on it is printed a warning that the truck will not be delivered, when the work is completed, unless the owner returns this copy signed. The work is not held up awaiting the receipt of this authorization, however. The blue copy goes to the time clerk in the shop, and on the completion of the work is sent to the service department office. The hard copy goes to the shop foreman, who attaches it to the truck.

Assignment of Work

Each mechanic has a number. When the shop foreman assigns the various items on the repair order to the mechanics, he places their numbers on the hard copy opposite the items assigned to them. If there is a comeback on any of the work, this record makes it simple to locate the mechanic at fault. On receiving his assignment, the mechanic gets a time card on which is placed the repair order number, the customer's name, the mechanic's name and his number. This card is punched by the timekeeper. The back is arranged so that the mechanic can

list the work he does together with the time required for each operation. At the completion of the job, the card is turned in to the timekeeper, who punches it, computes the total time, multiplies it by the hourly rate of the man doing the work, and records the cost of the labor on the card. The time clerk enters the times required for the various operations on the back of the blue copy of the repair order, which is in his possession while the work is in the shop.

Labor Recorded on Blue Copy

The reverse of the blue copy is arranged in a unique manner. All the major repair operations are listed and spaces are provided for writing in miscellaneous jobs. There are three columns under each heading. The column headed S is used when the heading shows two operations. One operation is marked X and the other operation O. This letter is placed in the S column to indicate which operation is referred to. The mechanic's number is entered in the column headed No. and the time consumed under Hr.

Parts required in making repairs are secured by means of a stock requisition, which is filled out in duplicate. All withdrawals are approved by the foreman and receipted for by the mechanic. The parts department inserts the cost and selling prices of the parts issued on the requisition blank.

The cost department makes periodic collections of time cards and parts requisitions. The information furnished by these records is transferred to the back of the original white copy of the repair order. All the parts requisitions are entered at the top of the form. When the work is complete, a total is made, the government tax computed and a charge of 5 per cent for transportation added. Below, the labor sales are entered. The total hours actually put in on the work are increased by 12½ per cent to cover supervision. Labor is charged for at the rate of \$1.25 an hour.

The bottom of this form is arranged for the computation of the cost of sales. There are three columns under the heading Cost of Sales, but only the Repair column is used at the present time. The other two columns were provided for

listing the cost of work done by other departments, but these are no longer carried separately. The distribution of the sale is made in the lower right hand corner.

The white copy of the repair order is placed in a stiff envelope by the cost department as soon as it is received from the order clerk. This envelope bears the order number and the truck owner's name. These envelopes are filed in numerical order. All time cards and parts requisitions are filed in these envelopes after being entered on the white copy. When the shop finishes the work, the foreman stamps the hard copy and forwards it to the cost department. This is notification that the work is complete and that the job is ready for delivery. The cost department gets out its envelope, checks all the entries and the time cards against the hard copy, and, if O.K., forwards the complete file to the service manager, who inspects the figures for overcharges. The invoice is then made out. The envelope containing the white copy, the hard copy, the time cards and the parts requisitions is returned to the cost department where it is permanently filed in numerical order.

Service Manager's Files

The blue copy is forwarded to the service manager's office by the timekeeper. An envelope is provided for each owner here and the blue copy is placed in it. These envelopes are filed alphabetically. A card file is also maintained here. There is a card for each truck in this file and they are filed alphabetically according to the owner's name. On the front of this card is placed the model and engine number of the truck, the owner's name and address, the date on which he received the truck, his phone number and the name and address of his garage. On the back all repair orders are entered, the heading of the columns being as follows: Repair Order Number, Date, Charge and Amount. The Charge column is used to indicate who paid for the work; that is, whether it was paid for by the owner, an insurance company or was absorbed by the dealer as a matter of policy.

These two files are maintained for the use of the service manager. If he

These are the important forms used in the cost accounting system of the Manhattan Motor Corp. The front of the repair order follows conventional lines

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Detroit Plants Speed Up Production

SEPTEMBER OUTPUT WILL EXCEED AUGUST

Ford Leads in Improvement Over July With Total of 117,696

DETROIT, Sept. 12—Under the leadership of Ford, Dodge, Buick and Studebaker, business in September is expected to run considerably ahead of August in the passenger car field and probably will show a slight betterment in the truck field, owing to development of light delivery truck buying.

August production held very close to the marks set in July. Manufacturing in all plants was practically on a sales basis. Some reported a falling off from July totals, but others reported improvement.

Ford led all others in improvement over July, the August total of 117,696 being the highest production mark yet reached. This is capacity production, practically for all plants and assembly stations, and under the impetus of the new prices it is believed this figure will be equalled or exceeded in September.

Dodge is continuing at the rate of 550 cars daily and orders are said to be far enough in advance to continue this pace to the first of the year.

Studebaker continues at maximum monthly production of 8900 cars and reports no indication of a let-up in orders.

Buick led all General Motors units with an August production of 11,750 as outlined. The same pace will be held in September.

Oldsmobile has stepped up its production schedule for September to 80 daily, being influenced in this by the rush of orders following announcement of new prices.

Cadillac will hold its schedule of approximately 75 daily for September.

Oakland ran 25 per cent ahead of July in its August production, and looks for a similar gain in September. The company reports its new sport model getting a large share of business.

Scripps-Booth will continue its schedule of 25 daily for the present.

Reo Motor Car Co. reports 100 per cent production in August, the month being its third biggest since it began business. The same production totals or better are looked for in September, the business being divided evenly between passenger cars and speed wagons.

Briscoe Motor Car Co. reports August

business of 30 daily with the same schedule outlined for September.

Handley-Knight looks for a 50 per cent better business in September than in July or August.

Barley Motor Car Co. will increase its output in September.

Saxon looks for increased sales in September owing to increases in its dealer organization and reports from its investigators in the field.

Columbia Motors business increased in August and further increases are looked for in September. Announcement of its new models and prices brought a rush of orders which is continuing.

Hupp will step up from an August production of about 1500 to a September output of 2000.

Paige, operating in August on a 65 per cent basis, looks for a decided improvement in September.

Hudson-Essex beat its July figures slightly in August and looks for a real increase in September.

Lincoln, with a production of 225 in August, plans to build 275 in September.

Jackson Motors, operating in August at less than half of capacity, will step up in September.

Dort Motor Car Co. has started a series of fall openings in its distributor territories which will run into October. These are expected to carry business to new high marks in the fall months. August business was on a par with July.

Packard Motor Car Co. will reopen September 10 after a two-weeks' vacation period. Orders are reported running high on its twin six and single six cars, and production will be speeded up when the factory reopens, to meet demand. Truck business is light but showing more life than for several months.

D. L. MORGAN SUCCEEDS BATCHELDER IN N. A. C. C.

NEW YORK CITY, Sept. 12—D. L. Morgan, business man of New Haven, Conn., was to-day appointed chairman of the executive board of the American Automobile Association, succeeding Amos G. Batchelder, who held the position for many years and who was killed in an airplane accident in Maryland last May.

Morgan will devote his entire time to the work and will be located in the headquarters in Washington, D. C. Morgan has been closely associated with motor affairs for eight years. For six years he was with the Lackawanna Motor Club, Scranton, Pa., and for the past two years while living in New Haven has organized the Automobile Club of New Haven. In business he has been associated with Bradley-Smith Co., confectionery manufacturers.

FORD CUTS ADD MANY TO PLANT PAYROLLS

Reductions Followed Negotiations With Parts Companies for Greater Outputs

DETROIT, Sept. 12—Reduced prices in Ford cars and trucks followed a series of negotiations between the company and the companies supplying it with parts, by which new price arrangements were made in practically all cases and orders placed ahead for several months' supply.

Under the stimulus of this business all of these parts suppliers are now operating on an increased schedule, giving work to many men who have been listed among the unemployed for months, and in some cases overtime is being indulged in until the pressure of business is brought to a point where it can be met by regular daily operations.

Many departments of the Ford company, which had run ahead of the assembly branches in the latter part of August, are now resuming full time operation. Assembly has been at maximum speed since April, but despite this some of the factory departments have from time to time run ahead of actual car production, necessitating temporary lay-offs.

In a great many of the factories here orders for some time past have actually warranted an increase in production, but this has been steadily countermanded in an effort to hold operations to a steady day-to-day basis. Under the pressure of continued orders, however, several of these factories are adding daily to their employee organization.

COWDEN MADE RECEIVER MASTER TIRE, DAYTON

DAYTON, OHIO, Sept. 12—Robert E. Cowden has been appointed receiver for the Master Tire & Rubber Co., a \$1,000,000 corporation. His bond was fixed at \$25,000. Application for receiver was made by the Jenckes Spinning Co. of Pawtucket, R. I., the largest creditor. The Master company is one of five Dayton corporations which tried to refinance themselves through the French-Worthington "swindle gang." Attorneys said the receivership action was necessary before a reorganization could be effected.

Firestone Cuts Output

AKRON, OHIO, Sept. 12—The Firestone Tire & Rubber Co. has decreased production from 28,000 to 25,000 tires a day to conform with a decline in sales. The slump is seasonal and has been expected. Further reductions in output will be made as sales fall off.

Healthy Conditions Rout Pessimism

AUGUST SALES 70% OF SAME MONTH, 1920

Ford Business Greater Than Ever Before in History of Company

NEW YORK, Sept. 12—Pessimism which has been apparent in Wall Street for some time in reference to the automotive industry is not justified by actual conditions and has not been since March. August sales, exclusive of Ford, were 70 per cent of sales for August last year and were 2 per cent in excess of July. Business for July was 7 per cent better than in June. Ford sales for this period were larger than ever before in the history of the company.

Prospects Are Good

Prospects are that with Ford, Dodge, Buick and Studebaker as leaders sales in September will be on a par with those for August. In comparison with other years midsummer sales of passenger cars were almost unprecedentedly large in relation to the earlier months.

While the commercial vehicle branch of the industry is still at low ebb it is gradually improving, and there has been apparent in the last few weeks a considerably increased demand for light delivery trucks.

Not only was the vehicle manufacturing end of the business better in August than in July, but the same was true of parts and accessory manufacturers. July for them was slightly better than June and August slightly better than July. New orders and releases already received for this month indicate that there will be no falling off. Gradual reduction in tire production may be expected as the touring season comes to an end.

Competition a Factor

Purchasers of automobiles are being given the benefit of lower manufacturing costs resulting from wage reductions, greater labor efficiency and lower cost of materials. Keener competition also is a factor in price cuts on cars and trucks.

Retailers and distributors are hopeful, however, that whatever price adjustments remain to be made will be put into effect at once, for they believe price stabilization is necessary before there can be stabilization of sales.

In some sections dealers expect the belief of prospects that there will be further price cuts may interfere somewhat with September sales. There is

PENNSYLVANIA HAS 79,000 MORE MOTOR CARS THAN YEAR AGO

HARRISBURG, PA., Sept. 12—There are 79,000 more motor cars in Pennsylvania this year than in 1920, according to a report of the motor division of the State Highway Department.

The department has passed the 600,000 mark in issuing license tags. Last year less than 532,000 passenger car licenses had been issued at this time. It is expected that the number of passenger car owners in this State will be about 650,000 before the end of the year.

general expectation that after this month business will gradually taper off until the show season in January, but this is a perennial condition. There is in prospect an unusually heavy demand for enclosed models of passenger cars. The large number of new models which will be brought out this fall by makers of popular lines also is expected to stimulate sales. These two factors will prevent anything in the nature of a disastrous slump.

HARES MOTORS MAY HANDLE OWN LINE

NEW YORK, Sept. 12—Dissolution of the contract with the Locomobile Co. held by Hares Motors will have no effect on the future of the latter corporation. Hares Motors will continue to handle the sales of the Kelly-Springfield Motor Truck Co., and it is understood negotiations are pending for the taking over of the sales of one or more established passenger car lines.

If Hares Motors does not enter into contracts similar to those it held with the Mercer and Locomobile companies, it intends to revert to its original plan of developing a complete line of passenger cars and trucks. The engineering department of the company has worked out detailed plans for a complete line of both classes of vehicles. This would include passenger cars in three price classes and trucks of various capacities. The Hares Motors organization remains intact and no changes are contemplated.

No successor has been appointed as yet to A. K. Stewart, who has resigned as general manager of the Kelly-Springfield Truck Co. and returned to New York. Stewart took charge of the factory Feb. 1. The Kelly-Springfield plant is being operated on about the same basis as for the past few months, but the outlook for business is understood to be gradually improving.

TIRE MEN WILL HOLD FIRST CONVENTION

Dealers from All Sections of the Country Will Meet in Cleve- land, Oct. 18

CLEVELAND, Sept. 12—The National Tire Dealers Assn. Convention, which will be attended by dealers throughout the United States, will be held at the Hotel Winton, Cleveland, on Oct. 18, 19 and 20. This will be the first convention of the organization and the assemblage will be the first one of strictly tire dealers ever held. An elaborate program has been arranged covering the three days. It follows:

Tuesday, Oct. 18: 8.30 a. m. to 10 a. m., registration and assignment; 10 a. m. to 12 noon: Morning sessions—attendance recorded; reading of minutes of formative session held in Chicago, Jan. 30 to Feb. 2, 1921; report of president; report of board of directors; appointment of these committees, finance committee, nominating committee, auditing committee and resolutions committee. 12 noon to 2 p. m.: Luncheon; 2 p. m. to 4.30 p. m., report of secretary; report of treasurer; discussion of finances; recess.

Tuesday evening: Special demonstration of tire accessories and devices the dealer can employ in his business. The tire and accessory show will be open until 11 p. m.

Wednesday, Oct. 19: The entire day will be spent in Akron in inspecting the world's largest tire producing plants. It is planned also to send a delegation to Kent to inspect the only fabric mill in the Akron section. These two features will consume the entire second day and will prove very interesting and instructive to every delegate and visitor attending the convention.

Wednesday evening: The Cleveland branch of the National Association has arranged a program of stunts. The evening entertainment will be held in the Rainbow room of the Hotel Winton, and, although it will be considered part of the sessions, it is not compulsory that the delegates attend this event.

Thursday, Oct. 20: 9.30 to 12 noon, reports of committees; reports of special committees; unfinished business; 12 to 2 p. m.: luncheon; 2 p. m. to 4.30 p. m., new business; election of officers; discussion of topics.

Thursday evening: This will be the "night of nights" so far as the convention is concerned. A banquet and musical program has been planned. There also will be entertainment by professionals. Two speakers of national reputation, yet to be chosen, will talk.

Willys to Employ 2500

TOLEDO, Sept. 12—John N. Willys announced after a conference with other members of the executive staff of the Willys-Overland Co. that 2500 additional men would be placed at work in the plant and that an equal number would be called up within another week.

DES MOINES DEALERS HOLD AUTUMN SHOW

Attendance Small Due to Depression Which Exists Among the Farmers

DES MOINES, Sept. 12—Des Moines dealers held their annual early fall show this week in connection with the Iowa State Fair. The show was housed in Machinery Hall and was managed by C. G. Van Vliet, one of the managers of the winter show. It was held directly under the auspices of the fair association, and Van Vliet worked for the fair association rather than for the dealers association, but there was very close co-operation between the two organizations.

Attendance Smaller

Attendance at the fair was not up to that of previous years as a result of the depression which exists among farmers. There were no days of the fair which did not show a loss in attendance over the corresponding days, and Monday and Tuesday the shortage ran up to approximately 20,000 each day. In this connection there is more or less dissatisfaction among the motor car dealers in regard to the fair association's attitude in maintaining the admission and grand stand prices at the high price established last year. Dealers feel that had the old time price of fifty cents been reestablished the attendance would have been materially larger. There was also more or less complaint against the continuation of the war-time space rates which were charged the dealers. Last year the fair association boosted the space to fifteen cents per square foot, and the dealers feel that with prices of all kinds down below the last year's levels there should have been a cut in the space rates.

Show Is Satisfactory

As a show, however, this year's event was entirely satisfactory to a majority of the dealers. There were a total of 35 passenger lines shown, 20 lines of trucks and 34 accessory houses showing. Three local tire factories had motion displays in Machinery Hall.

In the main, Des Moines dealers have never looked upon the State Fair show as a real selling show, but have considered it a good investment from a publicity standpoint. They are able here to show their cars in comparison with all other makes, under one roof, to from thirty to fifty thousand people daily for six days.

While many dealers contented themselves with the publicity feature and with securing a valuable list of prospects, there was some actual selling. Worthy of note is the case of Harry F. Wynn, probably the only Negro handling a high grade dealer's contract in the State of Iowa, who on Monday sold two Stanley steam cars at the fair.

In the main, however, the best results obtained were from showing cars to a

400 M. A. M. A. COMPANIES SEND OUT "FAITH MESSAGE" TO AID BUSINESS

NEW YORK, Sept. 12—This message of good cheer is being sent broadcast by the Motor and Accessory Mfrs. Assn. through its 400 affiliated companies, on stationery, advertising and catalogs:

HAVE FAITH IN YOUR INDUSTRY!

The facts justify it—
Courage compels it—
Progress assures it—
Destiny proclaims it—
Business requires it—
The World needs it—

Civilization will not go into reverse THE AUTOMOBILE INDUSTRY MUST GO FORWARD!

This slogan expresses the spirit and plan of the credit convention which the association will hold at the Hotel Statler, Detroit, next week.

In addition to the topics relating to finance and credit, there will be a symposium by sales and advertising executives on the subject "Selling Strategy to Bring the Automotive Industry Back to Normal."

In line with the association's message of unswerving confidence, several speakers will discuss the topic "Why I Have Faith in the Automotive Industry."

comparatively large number of people in a short time and at a moderate expense. As one farmer expressed the situation to a salesman, "You can't expect farmers to buy cars when oats are selling at fifteen cents a bushel."

Money Getting Better

There are some signs of money conditions getting better in Iowa by reason of marketing grain and live stock, but in the main the farmer is using this money to liquidate his debts. Conservative dealers are looking to see a continuation of the present selling conditions for from thirty to forty-five days and then expect to see a material tightening up.

No tractors were shown in connection with the motor car show. All tractors were shown in the open air by the farm machinery houses which handled them.

Ford's Big Display

The Ford Motor Co. took over all of Power Hall and gave practically the same show as has the Herring Motor Co. in the past several years when it was handling the full Ford line. There was a very complete showing of power farming equipment and a moving picture exhibit of the Ford Power Farming educational films. All three local Ford dealers were working in connection with the Ford Motor Co.'s show.

BIRMINGHAM SHOW SET FOR NEXT MONTH

Several Hundred Entries Expected—City to Celebrate Semi-Centennial

BIRMINGHAM, ALA., Sept. 12—Applications are being received in large numbers for the Birmingham automobile show to be held during the semi-centennial celebration of this city's anniversary in October. E. W. Brownell has been named chairman of the committee to promote the show, and says the applications for space are being received fast.

No restriction will be placed upon any car entry into the show except that it be handled by a local dealer. Brownell expects several thousand entries, he says. A street will be blocked off for a block and the show will be held in this space for lack of a large display place. Covers will be provided and protection of every kind given the cars.

Harding Is Expected

The automobile show will continue the week of the celebration of the city's fiftieth anniversary, which will be from Oct. 24 to 30 inclusive.

President Harding is expected to be a guest of the city and will visit the automobile show during his stay.

Manufacturers or others who desire space reservations are urged to communicate with Brownell at Brownell Automobile Co. as soon as possible.

CENTRAL CANADA SHOW SPACE QUICKLY TAKEN

OTTAWA, ONT., Sept. 12—So great has been the demand for space in the motor section of the Central Canada Exhibition, Ottawa, from Sept. 9 to 19, that it has been found impossible to house all the displays in the main hall and the annex allotted to them and, as a last resource, the management has decided to erect a large tent to take care of the crowded-out exhibitors who demand a place because they believe that the sales prospects in Ottawa are of the very brightest.

AUTOMOBILE STYLE SHOW AT FORT WORTH, SEPT. 16

FORT WORTH, Sept. 12—The first of a series of automobile style shows for west Texas, marking a "better business campaign," will be held at Stamford, Sept. 16. Others will follow in speedy succession and at widely separated points. This is a concerted effort to attract the stockmen back into the automobile market and to show them the latest designs and values. Following the automobile show, a two-day trade tour will be made by the Stamford merchants into surrounding territory by motor. The trade trip will be a feature of the "style shows."

MEMPHIS MOTOR SHOW WILL LAST FULL WEEK

*Enclosed Body Jobs Will Be
Featured—Tendency To-
ward Low Models*

MEMPHIS, TENN., Sept. 12—The automobile show at the Tri-State Fair Grounds, Sept. 24 to Oct. 1 inclusive, is expected to surpass any automobile show previously held in Memphis.

The decorations will be elaborate; a color scheme of purple, gold and white being carried out through the building with decorative bunting. In addition to a balcony for the orchestra, which will be one of the best obtainable, a concrete walk has been built at the front of the building, and floral decorations will be used for beautifying the entrance.

Thomas H. Smart, chairman of the show committee, states that many companies have ordered special jobs for the show and a number of show chassis, electrically driven, will be on hand to demonstrate the working parts.

The enclosed body jobs will be featured, but in addition to these, many special paint jobs in touring cars and sport models will be exhibited. The tendency continues toward the low, rakish model with standardized chassis.

Associated with Smart on the show committee are Fred N. White, Jr., J. H. A. Campbell and H. W. Osolinach, secretary of the Memphis Automobile Dealers Assn.

DES MOINES WINTER SHOW WILL BE HELD FEB. 26

DES MOINES, IOWA, Sept. 12—Dates for the annual Des Moines winter show have been fixed as Feb. 26-March 8. On account of the limited space in the Coliseum, and as a result of the satisfaction which attended the 1921 show, the 1922 show will be a split show, the first half being devoted to enclosed cars and the last half to open models. No trucks will be shown at the Coliseum. Dean Schooler and C. G. Van Vliet, who have so successfully conducted Des Moines shows since the first one, will preside over the 1922 show.

AUTOMOTIVE SECTION FOR KENTUCKY FAIR

LOUISVILLE, KY., Sept. 12—One entire section of the new \$300,000 Merchants and Manufacturers Building at the Kentucky State Fair has been turned over to the automobile dealers and automobile accessory dealers. Cross declares the automobile show at the State Fair this year will eclipse any similar display at any state fair in the country, as virtually all the big dealers have contracted for space.

Among those who have designated where their displays will be located are the Louisville-Overland Co., the Southern Motors Co., Hite Bowman, Prince Wells

Co., Ford Dealers Assn., Glossbrenner Motor Sales Co., Klein Motor Co., the Kentucky Wagon Mfg. Co., the Mercury Body Co., Kentucky McWade Supply Co., Cumberland Tire & Rubber Co., Howard Tire Co., Columbia Motor Parts Co., Kokomo Tire Co., Keller Mfg. Co., Andrew Cowan & Co., New Life Time Co., Autovac Co., Alemite Lubricator Co., Caterpillar Retread Co., Gulf Refining Co., Consumers Oil Co. and the Standard Oil Co.

All displays pertaining to the automobile business will be confined to the new building as no outside space will be sold, as was the custom in previous years.

EXCISE MOTOR TAX SHOWS DECREASE IN RETURNS

WASHINGTON, Sept. 12—Tabulation of total collections of internal revenue from all sources for the fiscal year 1921 show a decrease of \$28,377,631 in the excise tax on automobiles from the figure for 1920, when this form of taxation brought in \$143,922,792.

Carried out in detail, the payments of automobile excise taxes follow:

1920—Automobile trucks and automobile wagons.....	\$14,471,464.32
1921—Automobile trucks and automobile wagons.....	11,640,051.98
Decrease.....	\$2,831,412.34
1920—Other automobiles and motorcycles.....	\$76,315,814.26
1921—Other automobiles and motorcycles.....	64,388,105.80
Decrease.....	\$11,927,708.46
1920—Tires, parts, or accessories for automobiles.....	\$53,135,513.43
1921—Tires, parts or accessories for automobiles.....	39,517,602.60
Decrease.....	\$13,617,910.83

CONVENTION OF SERVICE MANAGERS NOV. 15-16

NEW YORK, Sept. 12—The convention of factory service managers, to be held under the auspices of the National Automobile Chamber of Commerce, will be held Nov. 15 and 16 instead of Nov. 22, as tentatively planned, as this latter date comes too close to Thanksgiving Day. A questionnaire has been sent to members asking for suggestions as to subjects to be taken up at the convention, and it is probable that arrangements will be made to conduct those delegates who are interested through local factories and service stations.

Seek Traffic Ferries

PHILADELPHIA, Sept. 12—A plan of having special ferries to convey automobiles and trucks from Philadelphia to Camden and return, across the Delaware River, to avoid traffic congestion, is being backed by the Automobile Club of Philadelphia and the Keystone Automobile Club. The cost of a vehicular ferry, like those across the Hudson River, would approximate \$300,000, according to C. A. Grier, superintendent of the Pennsylvania railroad ferries at Camden. At present the railroad handles 550 motor cars an hour on Sunday nights and soon will care for 675 cars an hour.

RURAL BUYING BRISK IN INDIANA DISTRICT

Discouraging Crop Story Denied—Trucks, Tractors and Passenger Cars Go Well

INDIANAPOLIS, IND., Sept. 12—The Indiana farmer is buying trucks. He also is buying tractors. And with some other folks he is buying passenger cars. And this is in face of the very discouraging stories circulating about Indiana crops in general, and despite the particular story that the Indiana farmer will have to buy potatoes for his own use and at a rather high figure. Exhibitors at the Indiana State Fair, after the first three days, were trying to outboast one another on the amount of automotive equipment sold. Boiled down to even 25 per cent of their face figures, these boasts indicated something of a record run of business for the fall motor show, the twenty-third annual event staged by the Indianapolis Automobile Trade Assn.

Quite a few changes are noted from the list of exhibitors in the big show of March this year. For the first time in this show is the Wills St. Claire. The cars and chassis for this exhibit were in a train wreck last Sunday near Monon, Ind. Nearly every railroad man on the Monon lines came into contact with Ray Brown, of R. D. Brown & Co., Wills St. Claire distributors, in his efforts to locate and move the cars. They were rescued and placed in the exhibit a half hour before opening time. "Andy" Hutchinson, secretary of the I. A. T. A., was not so fortunate. His plan for a premier for the Detroit Junior, electric car, was spoiled when the shipment was lost in transit and at mid-week had not been located. The largest and most expensive exhibit was by the Losey-Nash Co., which is valued at more than \$80,000. Four exhibitors are in the show for the first time. Eighteen exhibitors of the March show are absent from this show, but there are eleven more exhibitors in this show than there were in March.

Departing from the old "still" exhibits, the tractors and some of the trucks are giving power demonstrations, control and flexibility trials. And the answer is found in the difference between the interest of the small "lookers" in the still show inside and the "questioners" in the close packed groups at the motion show under tents and in the open.

It is freely predicted that this will be the last time that the trucks and tractors will have space in the still show.

NEW CADILLAC TO BE SHOWN NEXT WEEK

DETROIT, Sept. 14—A new Cadillac, model 61, will be presented to the public and advertised by distributors throughout the country the first of next week. Prices will remain the same as for the present models.

FORM COMPANY HERE TO SELL ARMY TRUCKS

Corporation Seeking Dealer Representation in Nation for Reimported Vehicles

NEW YORK, Sept. 10—The Slough Trading Corp. of America has been organized as representative in the United States of the Slough Trading Corp., Ltd., of England to dispose of approximately 1000 former American army trucks purchased of the allied governments and sent here for resale. W. O. Crabtree, who has been well known in New York for several years as truck dealer, is general manager of the corporation, which is seeking dealer representation throughout the United States.

The trucks include Mack, Pierce-Arrow, White, Packard and Riker and range in capacity from 3½ to 5 tons. They will be sold as reconditioned vehicles at approximately one-half the list price of similar new trucks.

The Slough Trading Corp. of America succeeds previous representation of the British company. It will handle only the distribution of trucks, selling through local dealers in New York as elsewhere.

Speaking of the project, Crabtree stated his opinion that the truck business in the United States cannot be put on a sound basis until these reimported trucks, which the entire business community knows are here and will be sold some time, have been disposed of. Up to date less than 70 of the Slough reimportations have been sold and Crabtree feels that uncertainty will prevail in the truck markets until the balance of the 1000 vehicles are put in the hands of users.

Crabtree makes no claim that the trucks are "as good as new," stating frankly that some have been operated and others have suffered sufficient deterioration in shipment and storage to necessitate reconditioning.

N. A. C. C. DIRECTORS SEE BRIGHT FALL PROSPECTS

NEW YORK, Sept. 12—While directors of the National Automobile Chamber of Commerce have no illusions concerning the future, they are well satisfied with the condition of the automotive industry. They realize that they are in much better position than manufacturers in almost any other line. Strong feeling prevails that whatever price readjustments are in prospect should be made immediately so that business can be stabilized for the fall. It is pointed out, however, that purchasers are getting the benefit of price reductions and that this is true of practically no other commodity.

Reports from 20 distribution centers at the directors' meeting last Thursday showed that retail business for August was on a par with July except for two agricultural districts. This is considered a very gratifying showing. The reports

What's Coming?

THERE is much in store for men in the automotive field in forthcoming issues of Motor World. Some important things are happening in the industry and Motor World will tell its readers about them.

Motor World of Sept. 21

There will be accounts, written especially to assist automotive merchants both in the wholesale and retail fields, about the meeting in Chicago of the National Association of Automobile Show and Association Managers and the convention in Detroit of the Motor and Accessory Manufacturers Association.

Motor World of Sept. 28

There will be an article giving all the details of a plan of analyzing territory for sales, worked out by a passenger car manufacturer and applied to dealer territory.

Motor World of Oct. 12

This will be the annual Winter Business Number of Motor World, which will survey conditions and describe the sales possibilities of the fall and winter and present practical "how to do it" articles on winter business in all fields of automotive merchandising. This number also will have some practical winter service articles for the car and truck dealer and service man.

indicate that the frequent price changes in the last two weeks will have an adverse effect upon September sales but it is believed that if there are no other changes business will be stabilized and there will be a satisfactory volume of trade. After this month sales are expected to taper off gradually until the show period, although there is in prospect an unusual demand for enclosed cars.

Reports from manufacturers of car shipments for August show that they were virtually the same as in July.

Application blanks and diagrams for the New York and September shows have been sent out. All applications for space will be considered now and the first allotment must be received not later than noon of Oct. 1. Drawing for space in the automobile sections will be held at the N. A. C. C. headquarters here Oct. 6. Drawings by applicants who are not members of the N. A. C. C. will take place as soon thereafter as possible.

Motor Tax Eliminated

WASHINGTON, Sept. 12—New recommendations made to the Senate finance committee by Secretary of the Treasury Mellon in reference to taxation do not contain his original proposal for a tax on automobiles. So much opposition to this plan developed that it has been definitely abandoned.

DURANT OF CANADA TO MAKE OWN TIRES

All Parts to Be Made There— May Do Same Here—Mak- ing Durant Four

NEW YORK, Sept. 12—Preparations are being made for the incorporation of Durant Motors of Canada, Ltd., for which a plant at Leaside near Toronto was purchased last week by W. C. Durant. Plans for the Canadian company have not been completely developed but they have been so far formulated that it can be said they are of great importance from the viewpoint of the Durant enterprise.

The factory which has been purchased was erected by the American Government for a munitions plant. It was completed almost simultaneously with the armistice and never was occupied. The site includes 18 acres and plans already have been made for the erection back of the present building of a three story assembly plant 600 feet long and 130 feet wide. The building which has been purchased will be used for the manufacture of motors, axles and differentials. In addition there will be erected a wood-working plant for the construction of bodies. It also has been learned that the Durant interests will manufacture in Canada the tires which will be used on the car made there. In fact every part will be made in Canada including the electrical equipment.

While no official information is obtainable at Durant headquarters, the natural inference is that if all the parts which go into the Canadian car, including tires, are to be made by Durant, the same procedure ultimately will be followed in this country. The Canadian plant will be put in operation next March with a capacity of 100 cars a day. The Durant four will sell in Canada for \$1,280 f.o.b. Toronto. The price in the United States is \$890.

The Durant four already is in production at the Long Island City plant and a few already have been turned over to purchasers. Production will be increased.

Alemite-Rimtco Settled

NEW YORK, Sept. 12—The difference over the patent rights involved between the Bassick Mfg. Co. of Chicago, manufacturer of the Alemite System of lubrication and the Rhode Island Machine & Tool Co., of Woonsocket, R. I., manufacturer of Rimtco High Pressure System of lubrication, has been settled. The Rimtco gun will be manufactured as heretofore but under an agreement with the Bassick company which gives the former full rights to manufacture and sell the Rimtco pressure grease gun.

Sundries Firm Bankrupt

NEW YORK, Sept. 12—Schedules in bankruptcy have been filed by the Automobile Sundries Co., Inc., of this city. Liabilities are listed at \$80,026 and assets at \$60,789. The principal creditor is the Champion Spark Plug Co., which has a claim for \$29,506.

VERDICT OF \$48,000 IN PERLMAN RIM SUIT

Louis D. F. Munger Wins Patent Litigation in the Courts for Several Years

NEW YORK, Sept. 12—The Federal Court of Appeals for the second circuit has handed down a decision granting \$48,000 damages to Louis D. F. Munger in his patent litigation against the Perlman Rim Co., which has been in the courts for several years. After the validity of the Munger patent had been sustained in the higher Federal courts the master who heard the evidence decided that Munger was entitled to \$72,000 damages. The defendant then appealed on this point and the Circuit Court of Appeals cut the amount of damages to \$48,000.

Munger has similar suits pending against the Firestone Tire & Rubber Co. and the Goodrich Rubber Co. They were filed several years ago but have been held in abeyance pending the result of the suit against the Perlman Rim Co. Now that damages have been assessed in the original action the other suits will be pressed, according to W. A. Redding, attorney for the plaintiff.

The Munger patent expired on Dec. 5, 1916, but suits for infringement can be filed up to Dec. 5, 1922. Damages for the use of the patent, which it is alleged has been infringed, can be assessed, however, only for a period of five years prior to the filing of the suits. It was said to-day at the offices of Redding that no suits would be started against automobile manufacturers and that no litigation is contemplated beyond that which is now pending.

The affairs of the Perlman Rim Co. have been in the courts for years and constitute one of the most dramatic and romantic chapters in the litigation connected with the automotive industry. Munger came into the case several years after the Perlman Rim Co. had established the validity of the patent covering the collapsible rims in question. The validity of the patent had been sustained in a suit brought against the Standard Welding Co. by Louis Perlman, and all Munger had to do was to establish his ownership of the patent.

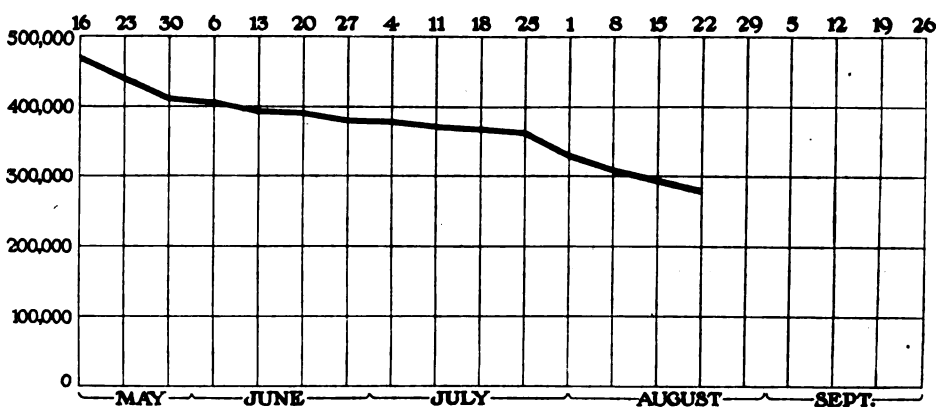
Templar Cars Reduced

CLEVELAND, Sept. 12—Another cut in prices of \$400 is announced by the Templar Motors Co. The open models have been reduced from \$2,385 to \$1,985 and the enclosed models from \$3,185 to \$2,785. The open cars now cost \$900 less than on June 30 and the enclosed cars \$1,000 less.

Vim Trucks Cut

NEW YORK, Sept. 12—The Standard Steel Car Co., which now owns the Vim trucks, has announced the following new prices:

Model	Old Price	New Price
Vim 29.....	\$1,355	\$1,050
Vim 30.....	1,550	1,175
Vim 31.....	2,475	1,975



Idle Freight Car Record

The black line represents the record of idle freight cars throughout the United States. It is a business indicator of interest to all automotive men, and especially to the truck dealers. When the railroads are busy carrying merchandise it follows that manufacturers and merchants are busy fulfilling the orders of customers. Between May 16 and August 8 the average net car surplusage has shrunk from 469,770 to 280,761, a decrease of 189,009, or about 41 per cent in that period. In the week ending August 15 the shrinkage of surplus cars was 13,011, and in the week ending August 22 it was 14,540. The chart above shows the gradual downward trend of freight car surplusage since May 16.

PRICE REDUCTIONS CONTINUE; NEW CUTS MADE ON PASSENGER CARS, TRUCKS AND TRACTORS

Studebaker "Six" Cut

SOUTH BEND, IND., Sept. 8—Another reduction in prices of the "Light Six" Studebaker cars is announced by President Erskine. He attributed the cut to lower manufacturing costs resulting from larger production. The prices follow:

	New Price	Old Price
Roadster	\$1,125	\$1,300
Touring	1,150	1,325
Coupe	1,550	1,695
Sedan	1,850	1,995

Last December the price of the touring car was \$1,485 and the sedan \$2,450. The Studebaker plants are operating at capacity and production is larger than ever before.

Yuba Tractors Drop

SAN FRANCISCO, Sept. 12—A 5 per cent reduction in price has been made on all tractors manufactured by the Yuba Mfg. Co. of this city. The new list prices are as follows: Model 12-50, \$2,470; 15-25, \$2,945; 25-40, \$4,417.60; 20-35, oversize, \$3,975.75; Rodebuilder, \$4,750.

Chevrolet Prices Down

NEW YORK, Sept. 12—The Chevrolet Motor Co. has announced the following price cut for the 490 model, fully equipped, effective Sept. 3: touring car, \$525; roadster, \$525; coupe, \$875; sedan, \$875. This is a reduction of \$100. It is the third reduction on the model since June when the price was \$1,185.

Changes in specifications have been made in the model. The model has undergone construction changes whereby the rear axle used with spiral bevel ring gear and pinion and hand controlled emergency brake lever. Timken roller bearings are substituted in the front wheels. A new assembly method has been introduced securing positive alignment of transmission.

Chevrolet Trucks Cut

DETROIT, Sept. 12—Price cuts have been made in Chevrolet Model T 1-ton truck and Model G ¾-ton, the former from \$1,225 to \$1,125 and the latter from \$820 to \$745.

Merchant's Trucks Drop

YORK, PA., Sept. 12—Effective Sept. 3, 1921, the list price of the Atlas "Merchant's Dispatch" is reduced to \$1,550 f.o.b. York, Pa. This is the second cut in the price of the "Merchant's Dispatch" within a year and makes a total reduction of \$215.

The "Merchant's Dispatch" is a 1-ton, worm-drive high speed unit; chassis equipment including Goodrich Silvertown cord tires, electric starting and lighting, windshield, etc.

Indiana Trucks Lower

MARION, IND., Sept. 12—Reduction of \$705 on the 1½-ton and reduction from \$115 to \$450 on all other sizes of Indiana trucks, were announced here today by the Indiana Truck Corporation. The price cut brings the 1½-ton truck to \$1,745 list. No change in specifications has been made.

Ford Canada Reduces

DETROIT, Sept. 12—The Ford Motor Co. of Canada, Ltd., has announced new prices on all models. The touring car hereafter will sell for \$565; the roadster \$515; the chassis for \$470; the coupe for \$890 and the sedan for \$990. The truck chassis will sell for \$615. Starting and lighting equipment will cost \$85 additional.

Wichita Tractors Down

WICHITA FALLS, TEX., Sept. 12—Wichita Motors Co. has announced a price cut of \$500 on the Wichita tractor, Model T. It will now sell for \$2,000.

NEW BOSCH MAGNETO COMPANY LAUNCHED

Otto Heins Heads German Corporation With Offices in New York City

NEW YORK, Sept. 12—The Robert Bosch Magneto Co., Inc., which has been incorporated at Albany with a capital of \$250,000, has opened offices in the Goodyear Rubber Co. building at 123 West Sixty-fourth Street. Otto Heins, who was president of the Bosch Magneto Co. before it was taken over by the alien property custodian and reorganized into the American Bosch Magneto Corp., is president of the new corporation. He has a suit pending against A. Mitchell Palmer, former alien property custodian, and officers of the American Bosch Magneto Corp., for the return of the property and patents, on the ground that fraud was practiced in their sale. Pending the outcome of the litigation for the return of the original Bosch property and patents, Heins says the new company is going ahead with the manufacture of magnetos on the old patents.

Admits Suit Likely

Harvey T. Andrews, attorney for Heins in his action against Palmer, is secretary and general counsel of the new company. He does not deny that the American holders of the patents may sue for infringement of their rights when the new company begins production of Bosch magnetos, but in this connection he contends that the purchasers of the patents at the sale by the alien property custodian paid only \$1 for the patents.

"Under these circumstances," Andrews said, "it would be interesting to find out what part of that amount, if any, would finally be allowed by the court as damages, assuming that the present holders of the patent sue for infringement and that they are successful in such a suit."

The treasurer of the new company is Guenther Jahn, who was a stockholder and an officer of the original Bosch Magneto Co.

Heins is a German citizen and an engineer of long experience. He organized the Bosch Magneto Co. in this country with a small capital and asserts that he controlled the company at the time it was seized by the alien property custodian, although Palmer contended that the stock actually was owned by Germans living in Germany, chiefly by Robert Bosch.

Consider Factory Site

Heins has not selected a factory site, but says he is considering several plants already built. According to his statement, the new company will manufacture magnetos, spark plugs, starting and lighting systems for automobiles, airplanes and motorboats as well as other electrical devices.

It is the purpose of the Robert Bosch Co. to compete with the American Bosch Magneto Corp., and it will offer for sale

magnetos manufactured here and also in Germany. The Germans claim to be able to manufacture such articles more cheaply than they can be made in America. The company also claims to have a new Bosch invention for use in low priced automobiles. This is a combination battery and ignition system. It also will offer a new Bosch electric lighting system for high priced cars. Heins has filed applications for new patents in the patent office at Washington.

STOCKHOLDERS AGREE ON FISK-FEDERAL MERGER

SPRINGFIELD, MASS., Sept. 12—Stockholders of the Fisk Rubber Co. and the Federal Rubber Co. have voted to accept the proposal of the directors for a consolidation of the two companies and the purchase of the Ninigret Co. The consolidation will take the name of the Fisk Rubber Co. The company will issue \$10,000,000 in first closed mortgage, 20 year 8 per cent sinking fund, gold bonds at 99 with interest to yield 8.10 per cent. The bonds are uncalled until Sept. 1, 1931. During the life of the bonds control of the company through the right to elect two-thirds of the directors will be vested in James Dean of Dillon, Read & Co.; Otis H. Cutler, chairman, of the American Brake Shoe & Foundry Co., and H. T. Dunn, president of the Fisk Rubber Co., or their successors.

It is expected that consolidation of the Federal and Ninigret companies, which had been controlled through stock ownership, with the Fisk company will permit substantial economies.

SHERMAN ADDRESSES COLUMBUS GATHERING

COLUMBUS, OHIO, Sept. 12—A gathering of forty-two members of the Automotive Equipment Assn., together with their salesmen, attended a ginger-up meeting called at the Athletic Club Saturday, Sept. 3, to hear Ray W. Sherman, merchandising director of that organization, expound his ideas of salesmanship. The meeting was called when it was arranged to have Sherman in Columbus, and many responded, as they were much interested in the message carried by him.

The firms represented at the meeting were the Justus & Parker Co., the Griswold-Sohl Co., the Pennsylvania Rubber & Supply Co., the Columbus Varnish Co., the J. I. Cooper Rubber Co., and the J. P. Gordon Co.

SPARTANBURG, S. C., Sept. 12—Ray W. Sherman, merchandising director for the A. E. A., has accepted an invitation to deliver an address at the annual meeting of the South Carolina Automotive Trade Association in Greenville in December, the exact date to be announced later. Evil practices which have been established during the period of financial stress may be discussed and plans considered for a return to business upon a sound, economic basis.

N.A.C.C. MEMBERS URGED TO PUSH TRADE BILLS

Bulletin Suggests Recess Opportunity to Give Views to Representatives

NEW YORK, Sept. 12—The National Automobile Chamber of Commerce has sent to its members a bulletin calling their attention to the fact that the month's recess taken by Congress will give an opportunity to meet members of both Houses in person and present views on legislation which will be taken up during this session. From the viewpoint of the automotive industry the most important measures are the:

Phipps-Dowell-Townsend Highway bill, which has been passed by the House and Senate and now is in the hands of conferees. The measure as it stands carries an appropriation of \$75,000,000 for one year for main highways.

The taxation bill, which has been passed by the House and is now in the hands of the Senate Finance Committee. As the measure now stands it does not remove the excise tax on automotive vehicles, tires, parts and accessories.

Graham Bill Is One

The Graham bill, which provides for the imposition of a 90 per cent ad valorem duty on all American-made goods exported for use by the American Expeditionary Forces or allied governments, sold to other governments by the United States Liquidation Commission and later sold to speculators who have been reimporting large quantities to this country, including motor trucks and passenger cars. The measure was passed by the House and reported favorably by the Senate Finance Committee with an amendment which would limit its effect to goods purchased after Aug. 15 and reimported after Nov. 1, 1921. Passage in the Senate under unanimous consent was prevented by objections by Senators Pomerene and Hitchcock.

The Dyer Motor Vehicle Theft Act, which was passed by the Senate and reported favorably by the House Judiciary Committee, but passage by unanimous consent was prevented by Representative Mann of Illinois.

The tariff bill, which would reduce the import duty on automobiles to a uniform rate of 25 per cent and which would provide for a 5 cents per pound duty on aluminum instead of placing it on the free list or retention of the present duty of 2 cents per pound asked by the N. A. C. C.

Bus Earnings Large

DETROIT, Sept. 12—Accomplishments of the Detroit Motor Bus Co. for the first full year of operation have exceeded expectations. The first line was opened June 11, 1920, with six buses covering a four mile route. Gross earnings now are averaging \$3,500 daily compared with \$500 the first day.

TIRE MANUFACTURE SHOWS STEADY GAIN

Statistics of Rubber Association Also Show Decline in Stocks on Hand

NEW YORK, Sept. 12—Statistics compiled by the Rubber Association of America on tire production, shipments and inventory, for the Department of Commerce, show a steadily increasing volume of manufacture and an equally steady decline in stocks on hand. The figures by months since November, 1920, which is taken as the base month, up to August, follow:

PNEUMATIC CASINGS

1920	Inventory	Production	Shipments
Nov.	5,880,016	649,742	806,023
Dec.	5,508,380	506,111	1,327,153
1921			
Jan.	5,319,605	703,430	965,417
Feb.	5,193,018	819,892	1,073,756
Mar.	4,597,103	1,163,314	1,614,651
Apr.	4,527,445	1,651,418	1,785,951
May	4,451,668	2,100,917	2,085,882
June	4,154,456	2,313,265	2,643,850
July	3,892,037	2,570,524	2,757,581

INNER TUBES

1920	Inventory	Production	Shipments
Nov.	6,131,935	742,815	920,938
Dec.	5,786,929	508,446	1,481,285
1921			
Jan.	5,586,163	740,824	1,042,617
Feb.	5,415,464	916,627	1,129,881
Mar.	5,044,861	1,346,483	1,643,690
Apr.	4,916,772	1,762,122	1,983,371
May	4,751,880	2,210,040	2,342,567
June	3,835,098	2,359,928	3,232,673
July	3,122,815	3,020,981	3,603,248

SOLID TIRES

1920	Inventory	Production	Shipments
Nov.	268,875	21,355	34,217
Dec.	303,473	16,297	40,828
1921			
Jan.	303,753	21,220	29,116
Feb.	304,374	23,365	29,599
Mar.	283,800	28,710	43,926
Apr.	269,985	28,859	42,080
May	264,633	35,156	40,122
June	240,336	28,395	49,867
July	220,003	35,123	55,678

"Production" and "Shipments" figures cover the entire month for which each report is made. "Inventory" is reported as of the last day of each month.

"Inventory" includes tires and tubes constituting domestic stock in factory and in transit to, or at, warehouses, branches (if any), or in possession of dealers on consignment basis, and as a total represents all tires and tubes still owned by manufacturers as a domestic stock.

"Shipments" includes only stock forwarded to a purchaser and does not include stock forwarded to a warehouse, branch, or on a consignment basis, or abroad.

CONSUMPTION OF GAS SHOWS LARGE INCREASE

NEW YORK, Sept. 12—The consumption of gasoline in the United States during the first half of the current year was larger by 259,313,353 gal., or a daily average of 710,447 gal., than that of the corresponding period of 1920. Total consumption was 2,300,115,990 gal., compared with 2,142,705,363 gal. in the first six months of last year. Production was larger than the previous year by approximately 18 per cent, but in spite of the enormous demand prices of gasoline have declined in all sections of the country. The decline, however, is attributed solely to the lower cost of crude oil, as it is contended that until

recently there has been little or no reduction in the cost of refining, while transportation charges are at the same level as they were at the peak of 1920.

Down 31 Per Cent

Reductions in gasoline prices on the average amount to 31 per cent, taking the leading cities of the United States as a whole. The average price at the close of August was 20.2 cents, compared with 29.3 cents a gal. on Jan. 1 of this year. The drop, in all, amounts to 9.1 per cent. The largest declines since the beginning of the year have been at Dallas, Tex., and Denver, Col., where they amounted to 13 cents a gal. in each city. The lowest wholesale price is 15 cents a gallon at Kansas City, Mo., while the highest is 25.5 cents in Boston.

A. M. GIBBES, DISTRIBUTOR IN SOUTH, DIES IN OFFICE

COLUMBUS, S. C., Sept. 12—A. Mason Gibbes, head of the Gibbes Machinery Co., Packard, Paige and Durant distributor in South Carolina, died suddenly in his office. Gibbes, whose company did an extensive machinery and foundry business as well as wholesaling and retailing automobiles, was one of the strong men in the industry in the Southeastern States. He was one of the organizers and first president of the South Carolina Automotive Trade Assn., and was holding the office when he died.

Gibbes had been influential in bringing about legislation in his home State favorable to the industry, and through Senator Dial of South Carolina had exercised considerable influence on Federal legislation. He had done a great deal of work to help elevate the tone of the trade in his home State. He was 44 years old. A brother, Frank H. Gibbes, had been associated with him in the affairs of the company.

RECEIVERS NAMED FOR AMERICAN MOTORS

NEWARK, N. J., Sept. 12—Federal Judge Lynch has appointed receivers for the American Motors Corp. of Plainfield in an equity suit filed by attorneys representing 80 per cent of the creditors of the company. The action is understood to have been taken with the consent of the company and is said to be equally for the protection of the creditors and the stockholders. The nominal assets are listed at \$3,500,000 and the liabilities at \$600,000. The company is a Virginia corporation with a paid-up capital of \$1,260,000.

The receivers appointed were Proctor W. Hansel, first vice-president and treasurer of the company, Plainfield, and James Kearney of Trenton. They were authorized to carry on the business for 30 days. The Fisk Rubber Co., with unpaid bills aggregating \$29,257, is the largest creditor. The American Motors Corp. was incorporated in 1916 to manufacture the "American Balanced Six."

ST. LOUIS WILL HAVE MOTOR EXPOSITION

Dealers and Manufacturers Plan Show from October 15 to 22

ST. LOUIS, Sept. 12—Realizing the necessity of focusing the attention of the public on passenger and commercial cars, the St. Louis Automobile Manufacturers and Dealers Assn. has decided to hold an automobile exposition in St. Louis from Oct. 15 to 22 inclusive.

Through the courtesy of the local Chevrolet branch, the immense plant of the General Motors Corp. has been placed at the disposal of the dealers for holding this fall exposition.

For the first time in years, sufficient space will be available to give adequate display to passenger cars, commercial cars and accessories. The week of Oct. 15 to 22 was chosen because of the great number of visitors who will be in the city at that time attending the St. Louis celebration of the Missouri Centennial, which will draw thousands of people from the surrounding territory.

Sales Inspiration

The success of the exposition and the interest in motor cars it will engender should have an important bearing on fall and early spring business of the motor car industry, not only in St. Louis, but throughout this section of the country.

It is planned to open the exposition Saturday, Oct. 15, at 2 p. m., and close Saturday night, Oct. 22, with an intermission of one day on Sunday. Robert E. Lee, secretary and general manager of the dealers' association, will be manager of the show, and H. W. Spaulding, manager of the Chevrolet Motor Co. of St. Louis, chairman of the show committee.

COLUMBUS PLANS FOR ENCLOSED CAR SHOW

COLUMBUS, OHIO, Sept. 12—The Columbus Automobile Trade Assn. has arranged for an enclosed car show, to be held at Memorial Hall, Oct. 10, 11, 12 and 13. The hall will be decorated for the occasion, and it is planned to restrict exhibits to enclosed jobs. While accessories will be displayed, they will be devices and accessories which go to help the operation of enclosed cars, and those which cannot be used on enclosed cars will be refused as displays.

The committee on arrangements consists of H. M. McCord, president of the Columbus Automobile Trade Assn., chairman; Don Cole, E. C. Brisley, Horace Taylor, Price Kinney, Fred Kaiser, I. B. Huffman, J. L. Thompson and J. S. Huff. J. T. Miller, the manager of the Columbus Automobile Trade Assn., will be in active charge of the show.

The show will be devoted solely to enclosed car models.

ASSOCIATION ACTIVITIES

New York Has Outing

NEW YORK, Sept. 14.—The New York Automobile Dealers Ass'n held its annual outing at Fred J. Wagner's farm, Smithtown, L. I., yesterday. It was a boosters outing in every sense of the word. The keynote of the entire day was the spreading of optimism and the necessity for breaking down pessimism heard here and there in the industry. The hosts this year were Walter A. Woods, president of the organization, W. O. Crabtree and Harry Stratton, vice-presidents, Albert Hirst, secretary-treasurer, Lee J. Eastman, Frank Carrie, I. C. Jones, George S. Morrow, Glen Tisdale and E. B. Jackson.

La Crosse Has Outing

LA CROSSE, WIS., Sept. 5.—The La Crosse Automobile Dealers Association held its annual meeting on July 25th, at which the following officers were elected: John L. Hofweber, president; F. X. Dietz, vice-president; Tom Berg, treasurer; Matt Cameron, secretary; Jack G. Weihaupt, member board of directors.

Columbus Has Day Off

COLUMBUS, OHIO, Sept. 13.—The annual outing of the Columbus Automobile Trade Association was held at Spring Lake, about five miles southeast of Columbus, Aug. 25. A large crowd was in attendance and various games and contests made up the program. One of the features was a horseshoe pitching contest, in which prizes were given to the winners. A dinner was served during the day and some speechmaking was indulged in. The committee on arrangements consisted of Frank J. Girard, Y. B. Jones, Fred Kaiser, A. I. Fishbaugh and J. L. Thompson.

Louisville Has Dinner

LOUISVILLE, KY., Sept. 12.—The automobile industry pays more tax to Kentucky each year than the whisky business paid in its biggest year, John R. Boyd, Louisville, told members of the Louisville Automobile Dealers Assn. at a dinner meeting at Fountaine Ferry Park. Boyd explained that the whisky paid into the State, city and county treasuries approximated \$2,000,000 during its flourishing days, and the automobile business paid approximately \$3,150,000 in 1920.

Columbus Dealers Meet

COLUMBUS, O., Sept. 12.—A meeting of a majority of the members of the Ohio Accessories Jobbers' Assn. was held at the Deshler Hotel, Columbus, recently, to discuss conditions in the accessories trade and to answer the questionnaire sent out to the various associations by the Federal Board of Commerce. In all eight of the 12 firms included in the membership of the State association were represented. The questionnaire was discussed at length and answers were given to the various questions.

A discussion of trade conditions showed that jobbers have been having a very satisfactory trade when the unsettled business conditions are taken into consideration. None of the jobbers had any complaint to offer and all agreed that the worst of the slump is over and that conditions will likely improve from this time on. One of the features of the meeting was a luncheon.

H. H. Brennan of Cincinnati is president;

Curtis Sohl of Columbus, vice president; C. H. York of Greenville, secretary, and Charles E. Justus, Columbus, treasurer.

The association went on record to support the coming meeting of the Ohio Automobile Trade Assn., which is scheduled to meet in Columbus, December 12, 13 and 14. Arrangements are being made for a large exhibit to be held at Memorial Hall and the Ohio Jobbers will participate in the various accessories displays. The annual meeting of the Ohio Accessories Jobbers' Assn. will be held in Columbus at the same time as that of the other organization.

After the "Pirates"

SAN FRANCISCO, CAL., Sept. 12.—War to the hilt has been declared on the so-called "pirate dealers" by the California Automobile Trade Assn. as a result of the recent semi-annual convention, held at Al Tahoe, on the shore of Lake Tahoe, in the Sierras. Under the name of "pirates" the State association combines automobile dealers, accessory stores and repair establishments who are doing business on a basis contrary to the best interests of the motoring public. The fight is to put these "wild-cat" dealers out of business, and the campaign was launched when reports to the Tahoe meeting showed that alleged co-operative buying organizations springing up all over California are offering serious menace to the legitimate dealers.

The California Automobile Trade Assn. is one of the largest and most powerful of its kind in the country, with more than 40 branches and with a membership which includes the great majority of the legitimate dealers in the automotive industry in all parts of California. At the Tahoe meeting, it was pointed out, and statistics brought forward to substantiate the charges, that the "co-operative organizations" now springing up in various parts of the State rarely last more than a few months, during which period they collect considerable sums from unsuspecting motorists, and then leave them holding the well-known sack when the head of the co-operative concern decides it is time to seek fresher pastures. The association, in its campaign to eliminate these fly-by-night dealers as well as piratical garage and repair men, says:

"The motoring public should know that the reputable tire men, accessory wholesalers and car manufacturers, will not allow their products to get into the hands of such dealers. Manufacturers who do national advertising know that to allow their products to get into the hands of unsafe dealers is fatal. This has been proved time and time again in the past, and will continue to be proved in the future. The California Automobile Trade Assn. is eliminating the crook from the automobile business in this State, and has pledged itself to continue its work along these lines."

That the work of the association is getting results is proved by the action of the Automotive Equipment Assn., a national organization of manufacturers and jobbers, which has just appropriated a large fund to organize all the States along the lines of the California Automobile Trade Assn. Eighteen other States already are so organized, and are using the famous California emblem—the blue wheel and the gold radiator—as well as the California association's methods in eliminating the "bad actor" from the automotive industry.

BUS RULING AFFECTS CONNECTICUT TRADE

Garages and Repair Stations Hit by Abandonment of Jitney

BRIDGEPORT, CONN., Sept. 12.—Largely as a result of the legislating out of business of a majority of the jitney buses in Connecticut, a record number of automotive employees are out of employment, while a garage mechanic now unemployed is considered to stand little show of a job at his trade within the State for a long time to come. Many garage and repair stations have had much of their business from the jitney trade.

Loss of this patronage has brought a greater depression in these lines than for many years, some establishments are likely to close, it is believed, and others have or are to cut down their force of mechanics. The fall and winter is likely to be a quiet one, compared with the past three or four, it is predicted. A few former jitneers have been taken on in garages, which they formerly patronized or in which they have a financial interest, throwing other employees out.

Leave for Des Moines

During the past week, it is estimated, fully 50 of the large buses, formerly used on jitney routes, have left Connecticut for Des Moines, Iowa, the trip being made overland. It is reported there is a big demand in the Western city for this means of transportation and that vehicles formerly used in Connecticut have been sold or leased to Iowa interests. Practically all of the buses are being operated overland by their former owners or former Connecticut jitney chauffeurs. Some plan to remain West for at least this winter, although some plan to return and take their chances in the East.

Harley-Davidson Wins

NORTHBAY SPEEDWAY, COTATI, CAL., Sept. 12.—Otto Walker, piloting a Harley-Davidson motorcycle, finished first in the 25-mile open professional race in the big bowl here Aug. 28, thereby setting a new national record for the distance of 16 minutes 29 seconds. This track is a mile and a quarter, so that there were 20 laps to the race, Walker maintaining a speed of 42 seconds to the lap, or 106 miles an hour. This record is faster than the record for the board track at Los Angeles, hitherto credited with being the fastest track in the country.

Gas Tax to be Urged

NEW ORLEANS, Sept. 12.—Governor Parker has announced that he will recommend a sales tax of 1 cent a gal. on gasoline to the special session of the Louisiana legislature which convened to-day. The constitution permits a 2 cents tax for road purposes.

CHANGES IN THE TRADE

Meivin Co., Indianapolis, has become Indiana distributor for the Westcott motor car line.

Coffin-Brown Co., Indianapolis, has relinquished the Stutz line and Indiana sales will be directed from the factory.

W. A. Murfey has resigned as sales promotion manager of the Standard Motor Truck Co., Detroit. He has not announced his plans for the future.

Charles E. Stutz Sales Co., Indianapolis, distributors of the H. C. S., have been assigned the Indiana contract for distribution of the Lincoln automobile.

L. L. Murphy has resigned his connection with the Olds sales branch in Detroit to join the Studebaker Detroit branch. Murphy at one time was cashier at the Olds factory.

Asheville Overland Sales Co., Asheville, N. C., has been taken over by the Asheville Overland Knight Co., successors. C. A. Thomas is vice-president of the new concern.

Lathrop-McFarland Co., Indianapolis, distributors of Cole and McFarland automobiles, have assumed the state distributorship of the Oldsmobile line of passenger cars and commercial wagons.

Charles C. Fagan Co., Portland, Ore., has been named as distributor for Oregon and southern Washington for the Wills Sainte Claire, which will be handled in conjunction with Pierce Arrow cars.

Louis L. Smith, for eleven years sales manager of the Cleveland branch of Willys-Overland, has become sales manager of the Nunn Motor Sales Co., Cleveland distributors of Handley-Knight cars.

Charles B. Seger, president of the United States Rubber Co., has been elected chairman of the board to succeed the late Colonel S. P. Colt. Seger remains as president also. Lester Leland continues as vice-chairman of the board.

Cole Aero Eight distribution, Birmingham, Ala., has been transferred from the Taylor Motor Company to the Ewart-Brewer Motor Co. In addition to the Cole Ewart-Brewer will continue as agents for the Haynes and Elgin Six.

R. N. Mosher, head of the Michigan Oldsmobile Co., has resigned after 17 years' connection with the Olds Motor Works during which time he served as comptroller and later in sale capacities. His plans for the future are not announced.

J. G. McGuire, president of J. G. McGuire, Ltd., Ottawa, Ont., distributors for Chevrolet cars, has disposed of the business for a sum said to be \$70,000 and will hand over the concern to the new owner in a few weeks when his name will be announced.

Curtiss-Indiana Co., Kokomo, Ind., has been appointed Haynes dealer for Howard, Cass, Tipton and Miami counties. Wilbur M. Fagley, general manager of the Curtiss-Indiana Co., will be in active charge of the sale of Haynes cars. The Oldsmobile agency will be discontinued by Fagley.

Asheville Overland Knight, Inc., has bought the interest of the Overland-Asheville Sales Co., of Asheville, N. C., and is taking over the distribution of Overland and Willys-Knight motor cars. E. S. Clark is general manager; C. A. Thomas, vice-president and treasurer, and Joe L. Deadwyler, secretary.

Payne Sales Co., Raleigh, N. C., has been chartered to do general automobile sales and repair business. Authorized capital stock is \$125,000. Incorporators are C. A. Payne, Maggie R. Payne and B. R. Poole, all of Raleigh. The company will handle the Paige and Scripps-Booth automobiles.

Koup Motor Co., Kansas City, Mo., has opened a new service station for its customers where they may get repair work done outside the customary hours of the sales company. At present they have 75 cars in the shop. The painting and top repairing that is done at the station is a new feature.

B. F. Nicholas of Indianapolis, who has been managing the Overland and Willys-Knight sales agency at Kokomo, Ind., for the past two months, has made arrangements to take over the salesroom occupied hitherto by the Isenhour Co., Isenhour having turned over the Haynes sales agency to the Curtiss-Indiana Co.

F. H. Johnson has taken over the distribution of the Oakland line in Northern California, with headquarters in Sacramento and branch offices in Marysville and Chico. H. B. Whitten, who has had the Oakland car in Sacramento, will continue his parts business, and probably will announce the agency for another car in the near future.

Stutz Motor Car Co. of America, Inc., has appointed the California Stutz Co. as distributors of the Stutz for northern California. The appointment came as the result of negotiations carried on for some time between Fred Wilson, assistant sales manager of the national organization, and L. D. Allen, general manager of the California Stutz Co.

Richard C. Fowler has resigned as assistant sales manager of Delco Light Co. to become vice-president of Campbell, Trump & Co., advertising agency of Detroit. Gage C. Tremaine has been named secretary of the company. With the addition of the new officers the agency name has been changed from Campbell, Blood & Trump to Campbell, Trump & Co.

Linscott Motor Co., Boston, Mass., has ordered a trainload shipment from the Reo Motor Car Co. It will require 75 to 80 freight cars to transport the shipment.

The Linscott Motor Co., which is headed by J. M. Linscott, is one of the oldest concerns engaged in the wholesale distribution of Reo products. It has been handling this territory continuously since 1905.

J. H. Carter of Little Rock, Ark., who for the past six years has been with the Little Rock Studebaker service stations, has accepted the position of service manager for the Arcade Motor Co., local distributors for the Studebaker automobiles. He is an expert Studebaker mechanic with a service of twelve years and a graduate of the Studebaker Corporation's School.

Alvin H. Smith, formerly connected with the branch of the Ford, and William F. Moore, have started a retail sales organization which will be known as the Smith & Moore, Inc. The company will handle Fords, including the various classes of automobiles, trucks and tractors. The new company is the ninth agency of this sort to be started in Marion County, which includes Indianapolis.

Christ & Patrick of Havana, Cuba, have been named distributors for Cuba for the Premocars, built by the Preston Motor Cor-

poration of Birmingham, Ala. The two members of this firm made a trip from Cuba to inspect the manufacture of the Premocar and made an extensive tour of the Preston factory. A good shipment of cars has already been made to the new Cuban distributor.

Shelby Motor & Tractor Co., Inc., Shelbyville, Ind., has taken over the Bowen Bros.' Ford & Tractor Agency, and also the contract of the Ford agency. The deal was under consideration for several weeks. F. Stafford of Indianapolis, vice-president of the new company, is now in charge of the business. He was formerly connected with the Lathrop-McFarland, Cole and Maxwell automobile companies.

Booth-Newton Motor Co., Charlotte, N. C., a new concern, will handle the Chalmers and Maxwell cars for this territory. The new firm is composed of J. L. Booth and C. E. Newton. Booth was for a time territorial supervisor for the B. and B. Motor Co., former distributors of the Chalmers and Maxwell cars. Newton was for years sales manager of the B. and B. Co., and before that spent some ten years with the Maxwell and Chalmers factory organizations.

Leach Biltwell Motor Car Co. of Los Angeles has completed arrangements for the opening of a factory branch in San Francisco within the next few weeks. A long time lease has been obtained on the new quarters formerly occupied by George Campe. It will be decorated in Oriental style and a full line of models will be installed. The first showing in the Golden City of the 1922 Leach models will take place early in November.

A. H. Ekbergh, for two years traveling representative in New England and New York State for the Anderson Motor Co. of Rock Hill, S. C., has just taken over the distributor interest for his company in central New York. His new corporation will be styled The Syracuse Anderson Motor Co. Ekbergh is a motor car pioneer, having been active in the selling department of the business since 1901. He will distribute Anderson cars exclusively. Territory comprises sixteen counties surrounding Syracuse, where he will have both wholesale and retail headquarters.

Reo Motor Car Co. of California is putting a Reo dealer in every important town of northern California. P. L. Emerson, vice-president of the company, is directing this forging of the chain of dealers, and his latest appointment is that of the Skinner-Hammond-Murray Co. of Stockton to handle the Stockton territory, a large and rich district in the mouth of the prosperous San Joaquin Valley. The Napa Motor Supply Co. has been given the Napa territory; the Petaluma district has been allotted to George Vogensen and Clarence Snygg, and the Santa Clara territory has become the exclusive property of Hamlin & Son of San Jose.

John A. Robertshaw, who has been in charge of the New York sales office for the Robertshaw Mfg. Co., of Youngwood, Pa., has been transferred to Chicago to take charge of the Chicago district. He succeeds H. P. Rasmussen, who has severed his connections with the company, having been made general western sales manager for the Gehrich Indirect Oven Co. C. M. Wolcott, who has had charge of eastern Pennsylvania, Delaware and Maryland territories, has been put in charge of the New York office. Walter L. Frederick, formerly of the Improved Appliance Co., of Brooklyn, N. Y., has assumed charge of the territory formerly covered by Wolcott. Frederick had his office in Philadelphia.

COMING EVENTS

SHOWS

Ottawa, Ont.	Sept. 9 to 17	Ottawa Motor Show.
Fort Worth, Tex.	Sept. 16	Automobile Style Show.
Cincinnati	Oct. 1-8	Fall Automobile Show, Cincinnati Automotive Dealers' Ass'n Music Hall
Memphis	Sept. 24-Oct. 1	Automobile Show, State Fair Grounds.
Columbus, O.	Oct. 10, 11, 12, 13	Enclosed Car Show, Columbus Automobile Trade Assn.
Pittsburgh	Oct. 15-22	Fall Show under auspices of Automotive Association.
St. Louis	Oct. 15-22	Automobile Exposition, St. Louis Manufacturers & Dealers Association.
Jersey City	Nov. 14-19	Second Annual Automobile Show, Hudson County Automobile Trade Association, Fourth Regiment Armory.
New York	Nov. 27-Dec. 3	Automobile Salon, Hotel Commodore.
Chicago	January	Automobile Salon, Drake Hotel.
New York	Jan. 7-13	National Automobile Show under auspices of National Automobile Chamber of Commerce, Grand Central Palace.
Chicago	Jan. 28-Feb. 3, 1922	National Automobile Show under auspices of National Automobile Chamber of Commerce, Coliseum.

Winnipeg	Feb. 6-11, 1922	Automobile Equipment Show, Western Canada Automotive Association.
Louisville, Ky.	Feb. 20 to 25	Louisville Automobile Show, auspices Louisville Automobile Dealers' Association.
Des Moines, Ia.	Feb. 26	Winter Automobile Show.
Santiago, Cuba	March, 1922	Annual Automobile Show.
Rio de Janeiro, Brazil	Sept., 1922	Automotive Exhibition in connection with Brazilian Centenary.

RACES

Los Angeles	Nov. 24	Speedway Events.
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CONVENTIONS

Chicago	Oct. 12-14	National Implement & Vehicle Association Convention, Congress Hotel.
Chicago	Nov. 14-19	Annual Meeting and Business Exhibit of Automotive Equipment Association.
New York City	Nov. 15-16	Semi-Annual Convention of Factory Service Managers N. A. C. C., H. R. Cobleigh Secretary.

The New Car and Truck Description Index

Giving the date and page number on which they appeared

Cars

Ace	Jan. 12, 1921-15	Nash Four	Nov. 10, 1920-24
Ambassador	Feb. 2, 1921-11	National (Sextet Phaeton)	Dec. 15, 1920-26
Buick Four	Aug. 10, 1921-28	Navarre	Jan. 12, 1921-13
Collinet (Salon)	Nov. 24, 1920-18	Northway 6	Jan. 12, 1921-13
Durant Four	Aug. 10, 1921-30	Oldsmobile Light 8	Mar. 9, 1921-33
Duesenberg 8	Nov. 17, 1920-33	Oldsmobile (Model 43-A)	Dec. 15, 1920-33
Essex (Cabriolet)	Nov. 10, 1920-33	Packard Single Six	Sept. 29, 1920-32
Fergus, 1921	Jan. 12, 1921-23	Palge Big Six (Six-66)	Sept. 1, 1920-34
Forster	Aug. 25, 1920-33	Parenti	Jan. 12, 1921-14
Friend	Jan. 12, 1921-14	Piedmont 430	June 29, 1921-30
Globe Four	Oct. 20, 1920-32	Pierce-Arrow	Nov. 24, 1920-32
Handley-Knight Four	Nov. 17, 1920-32	Premocar Special	Feb. 9, 1921-23
Haynes Model 50	Jan. 12, 1921-20	Rolls-Royce	Mar. 23, 1921-32
Jackson Four	Jan. 12, 1921-18	R & V Knight Four	Jan. 12, 1921-16
Kelsey	Dec. 1, 1920-31	Scripps-Booth Six	July 13, 1921-32
Kenworthy 8	Jan. 12, 1921-13	Sheridan Eight	Oct. 6, 1920-32
Kissel Coach Sedan	Jan. 19, 1921-21	Stanwood Six	Sept. 15, 1920-31
Lafayette (Coupe)	Oct. 27, 1920-40	Sterling Knight	Feb. 2, 1921-11
Lexington Series T	Jan. 5, 1921-32	Stevens-Duryea	Dec. 1, 1920-30
Liberty (Coupe)	Aug. 18, 1920-31	Wills-Sainte Claire	Mar. 16, 1921-28
Lincoln	Sept. 8, 1920-24	Wills Sainte Claire Roadster	July 20, 1921-33
McFarlan Type 147	Oct. 27, 1920-41		
Merced (Limousine)	Aug. 18, 1920-37		
Mercedes (Post War Model)	Oct. 20, 1920-33		
Milburn Electric (38D & 38T)	Jan. 12, 1921-21		
Moller	Mar. 30, 1921-21		

Trucks

Acme (½ ton)	April 13, 1921-23
Akron Multitruck (1 ton)	Feb. 9, 1921-32
Aries (5 ton)	Jan. 12, 1921-49
Armleder (1 ton)	Nov. 10, 1920-37

Available (1½ ton)	Aug. 4, 1920-32
Avery (1 ton)	Nov. 10, 1920-34
Bessemer (4 ton)	Jan. 12, 1921-30
Bollstrom (4 ton)	Nov. 24, 1920-34
Bridgeport (1½, 2½ & 6 ton)	Jan. 12, 1921-30
Brockway (Highway Express)	Jan. 26, 1921-25
Case (2 ton)	Feb. 16, 1921-16
Clinton (1½, 2½, 3½ & 5 ton)	Jan. 12, 1921-30
Commerce (Mercantile Exp.)	Nov. 10, 1920-37
Cyclone (1½ ton)	Mar. 30, 1921-32
Duplex (2½ ton)	Aug. 18, 1920-31
Federal (5-6 ton)	May 4, 1921-32
Gramm-Bernstein (1 ton)	Nov. 10, 1920-35
G. & J. (2 & 3½ ton)	May 11, 1921-32
G. M. C. (K-15, ¾ ton; K-16, 1 ton; K-41, 3½ ton; K-101, 5 ton)	Mar. 2, 1921-25
Huffman (Models B & C 1 & 2½ tons)	June 29, 1921-30
Inter Harvester (¾ ton)	Feb. 16, 1921-32
Kissel Speed Truck (1 ton)	Mar. 23, 1921-32
Lone Star (1½ ton)	Oct. 27, 1920-30
Lorain (2 ton)	Sept. 1, 1920-30
Mack (double red. axles)	Jan. 5, 1921-32
Moline farm truck (1½ ton)	Nov. 10, 1920-36
Pierce-Arrow (2 ton x 5, 3½ ton, v. 2, 5 ton, r-10)	Sept. 8, 1920-30
Rainier (3½ & 5 ton)	Jan. 12, 1921-31
Republic (¾ ton)	July 20, 1921-32
Republic Express, Model 10	Mar. 30, 1921-21
Rumely (1½ ton)	Nov. 10, 1920-36
Service Speed Wagon (1 ton)	Feb. 16, 1921-32
Standard 5-K (5 ton)	Apr. 13, 1921-32
Stoughton (1 ton)	Feb. 23, 1921-32
Stoughton (1½, 2 & 3 ton)	Aug. 25, 1920-32
Transport (3½ ton)	Nov. 3, 1920-31
Ward La France (5 ton)	Jan. 12, 1921-30
Winther	Feb. 2, 1921-11

VICTOR RUBBER MEN DISCUSS TIRE SALES

SPRINGFIELD, OHIO, Sept. 12—District managers of The Victor Rubber Co., who gathered here Friday afternoon at Hotel Shawnee, reported that the rubber tire business is good and that prospects are bright for business this fall and winter.

Discussing conditions, Sales Manager C. A. Swinehart said: "Usually there is

a slump in the rubber tire business in the fall, but the outlook for us is encouraging."

Swinehart said that Ira Stowe, of Springfield, manager of the Southern district, has just returned from the South, where he found the people much encouraged as a result of the price of cotton. Stowe says he expects a good rubber tire business in that section.

The Victor Co. is turning out an average of 750 cord tires a day.

"STUNT" ADVERTISING MOVES USED CAR STOCK

BIRMINGHAM, ALA., Sept. 12—Eight used cars valued at more than \$10,000 sold during the first three days of August is the record of E. R. Parker Motor Co. The success is attributed to "stunt" advertising. The company has just closed a contest in which \$1,000 was offered for an idea that would sell all the company's used cars in a given time.

Specifications of Current Passenger Car Models

NAME AND MODEL	Engine Make	Cylinders, Bore and Stroke	WB	Tires	2-Pass.	5-Pass.	7-Pass.	Compo	Sedan	NAME AND MODEL	Engine Make	Cylinders, Bore and Stroke	WB	Tires	2-Pass.	5-Pass.	7-Pass.	Compo	Sedan
Ace.....G	Guy	6-3 1/2 x 5	123	32 x 4	\$2975	\$2975	.....	\$3680	\$3680	Maibohm.....B	Falls	6-3 1/2 x 4 1/2	116	32 x 4	\$1575	\$1575	\$1575	\$2395	\$2395
Ace.....H	H.S.	6-3 1/2 x 5	123	32 x 4	2975	2975	.....	3680	3680	Marmont.....34	Own	6-3 1/2 x 5 1/2	136	32 x 4 1/2	4185	4185	3985	4875	5275
Ace.....I	H.S.	4-3 1/2 x 5	116	32 x 4	2260	2260	.....	.....	.....	Maxwell.....25	Own	4-3 1/2 x 5 1/2	109	30 x 3 1/2	845	845	.....	1445	1545
Allen.....Series 43	Own	6-3 1/2 x 5 1/2	110	32 x 4	\$1385	1385	.....	2195	2195	McFarlan.....1921	Own	6-4 1/2 x 5	140	33 x 5	6300	6300	6800	7500	7800
Ambassador.....R	Cont.	6-3 1/2 x 5 1/2	136	33 x 5	4500	4500	.....	6500	6500	Mercer.....Series 5	Own	4-3 1/2 x 6 1/2	132	32 x 4 1/2	3960	3960	3960	5180	5680
American.....C	H.S.	6-3 1/2 x 5	127	32 x 4	2195	2195	12350	3150	3150	Merit.....Cont.	Own	6-3 1/2 x 4 1/2	119	32 x 4	2245	2245	.....	.....	.....
Anderson.....Series 40	Cont.	6-3 1/2 x 5 1/2	120	32 x 4	2195	1795	1845	2795	2795	Metz.....R & RR	Dues.	4-4 1/2 x 6	129	32 x 4 1/2	5600	5600	.....	.....	.....
Apperson.....8-21-S	Own	8-3 1/2 x 5	130	34 x 4 1/2	.....	3000	3250	4500	4500	Mitchell.....F-40	Own	6-3 1/2 x 5	120	32 x 4	1995	1995	.....	2795	2895
Apperson.....Anniversary	Own	8-3 1/2 x 5	130	34 x 4 1/2	.....	3500	3750	.....	.....	Mitchell.....F-42	Own	6-3 1/2 x 5	120	32 x 4	1490	1490	.....	2590	2690
Auburn.....6-51	Cont.	6-3 1/2 x 4 1/2	121	32 x 4	167	1695	1760	2475	2495	Moller.....A	Own	4-2 1/2 x 4	100	27 x 3 1/2	2000	.....	1795	.....	.....
Beggs.....20T	Cont.	6-3 1/2 x 4 1/2	120	33 x 4	1775	1775	.....	2675	2775	Monroe.....S-9 & 10	Own	4-3 1/2 x 4 1/2	115	32 x 3 1/2	1285	1295	.....	.....	.....
Bell.....4-32	H.S.	4-3 1/2 x 5	114	31 x 4	.....	1495	.....	.....	.....	Monroe.....S-11 & 12	Own	4-3 1/2 x 4 1/2	115	33 x 4	.....	.....	2075	2175	.....
Bell.....6-50	H.S.	6-3 1/2 x 5	124	32 x 4	.....	1695	.....	.....	.....	Moore.....6-45	Cont.	6-3 1/2 x 4 1/2	122	32 x 4	1985	1985	2485	2985	2985
Biddle.....B1	Buda.	4-3 1/2 x 5 1/2	121	32 x 4	3475	3475	1245	2295	1795	Moore.....6-65	Cont.	6-3 1/2 x 4 1/2	125	32 x 4 1/2	.....	.....	2485	3485	.....
Birch Super-Four.....H.S.	LeR.	4-3 1/2 x 5 1/2	117	33 x 4	1195	1195	.....	.....	.....	Murray-Mac Six.....Own	Own	6-3 1/2 x 5 1/2	128	34 x 4 1/2	4250	4250	4250	.....	.....
Birch Light Four.....LeR.	LeR.	4-3 1/2 x 4 1/2	108	30 x 3 1/2	1045	1045	.....	.....	.....	Nash.....681-7	Own	6-3 1/2 x 5	121	33 x 4	1525	1545	11695	2395	2695
Birch Light Six.....H.S.	LeR.	4-3 1/2 x 5 1/2	117	33 x 4	1395	1395	1445	1995	1995	Nash.....682	Own	6-3 1/2 x 5	127	34 x 4 1/2	1875	1695	.....	.....	.....
Bow-Davis.....215	Cont.	6-3 1/2 x 5 1/2	126	32 x 4 1/2	2385	2385	.....	10500	10500	Nash Four.....41-4	Own	4-3 1/2 x 5	112	32 x 3 1/2	1199	1199	1795	1935	.....
Brewster.....91	Own	4-4 x 5 1/2	109	31 x 4	7000	7000	.....	.....	.....	National Sentet.....BB	Own	6-3 1/2 x 5 1/2	130	32 x 4 1/2	2970	2990	3980	3990	.....
Breco.....4-34	Own	4-3 1/2 x 5	125	32 x 4	1085	1085	.....	1685	1685	Nelson.....D	Own	4-3 1/2 x 4 1/2	104	32 x 4	1750	.....	.....	.....	.....
Brook.....S-21 A	Own	2-3 1/2 x 3 1/2	90	28 x 3	395	395	.....	.....	.....	Nema.....1C	Cont.	6-3 1/2 x 4 1/2	128	32 x 4 1/2	2800	2850	3200	3700	.....
Buick 1922-34-35-37.....Own	Own	4-3 1/2 x 5 1/2	109	31 x 4	955	975	.....	1475	1650	Northway.....430-KS	Lyc.	4-3 1/2 x 5	116	32 x 3 1/2	1035	.....	.....	5400	.....
Buick 1922-44-5-6-7.....Own	Own	6-3 1/2 x 5 1/2	118	33 x 4 1/2	1495	1525	.....	2135	2435	Oakland.....34-C	Own	6-2 1/2 x 4 1/2	115	32 x 4	1095	1195	1265	1625	1725
Buick 1922-48-5-50.....Own	Own	6-3 1/2 x 5 1/2	124	34 x 4 1/2	.....	1735	.....	2325	2635	Ogen.....6-60	Own	6-3 1/2 x 5 1/2	134	33 x 5	3850	3750	3900	5000	5400
Bush.....E.C.A.	Lyc.	4-3 1/2 x 5	116	33 x 4	.....	1195	.....	1750	1850	Oldsmobile.....43-A	Own	4-3 1/2 x 5 1/2	115	32 x 4	1145	1145	.....	1645	1745
Bush.....E.C.B.	Rut.	6-3 1/2 x 5	116	33 x 4	.....	1345	.....	.....	.....	Oldsmobile.....37-A	Own	6-2 1/2 x 4 1/2	112	32 x 4	1450	1450	.....	2145	2145
Cadillac.....59	Own	8-3 1/2 x 5 1/2	132	35 x 5	3790	3790	3940	4950	5190	Oldsmobile.....46	Own	8-2 1/2 x 4 1/2	122	33 x 4 1/2	1735	1735	.....	2625	2625
Carroll.....C	Roeh.	6-3 1/2 x 5	128	32 x 4 1/2	3185	3185	.....	.....	.....	Oldsmobile.....47	Own	8-2 1/2 x 4 1/2	115	32 x 4	11825	.....	2185	2425	.....
Case.....V	Cont.	6-3 1/2 x 5 1/2	126	34 x 4 1/2	2250	2250	2900	3285	3285	Overland.....4	Own	4-3 1/2 x 4	100	30 x 3 1/2	595	595	.....	850	850
Chalmers.....6-30	Own	6-3 1/2 x 5 1/2	117	32 x 4	1495	1545	.....	2295	2445	Packard.....Single-Six	Own	6-3 1/2 x 4 1/2	116	33 x 4 1/2	2975	2975	3650	3975	.....
Chalmers.....6-30	Own	6-3 1/2 x 5 1/2	122	33 x 4 1/2	.....	1795	.....	.....	.....	Packard.....Twin Six	Own	12-3 x 5	136	35 x 5	4850	4850	6800	6800	.....
Champion.....Tourist	Lyc.	4-3 1/2 x 5	113	32 x 3 1/2	1095	1095	.....	.....	.....	Paige.....6-42	Own	6-3 1/2 x 5	119	32 x 4	1635	1635	.....	2450	2570
Champion.....Special	H.S.	4-3 1/2 x 5	118	32 x 4	1195	1195	.....	2785	2885	Paige.....6-60	Cont.	6-3 1/2 x 5	181	33 x 4 1/2	12975	13295	2875	3755	3830
Chandler.....Six	Own	6-3 1/2 x 5	123	33 x 4	1785	1785	.....	.....	.....	Pan American E&F-655	H.S.	6-8 1/2 x 5	121	33 x 4	2000	2000	2100	.....	.....
Chevrolet.....490	Own	4-3 1/2 x 5 1/2	102	30 x 3 1/2	525	525	.....	875	875	Parenti.....1921	Own	8-2 1/2 x 4 1/2	125	32 x 4	2000	2000	.....	3100	.....
Chevrolet.....490	Own	4-3 1/2 x 5 1/2	110	32 x 4	975	975	.....	1575	1575	Patterson.....650	Cont.	6-3 1/2 x 4 1/2	120	32 x 4	1595	1625	2895	2815	.....
Cleveland.....40	Own	6-3 x 4 1/2	112	32 x 4	1295	1295	.....	2195	2295	Peerless.....56-S-7	Own	8-3 1/2 x 5	125	34 x 4 1/2	2580	2580	3600	3600	.....
Climber Four.....H.S.	Own	4-3 1/2 x 5	115	33 x 4	1450	1450	.....	.....	.....	Peters.....Own	Own	2-3 1/2 x 3 1/2	80	28 x 3	385	.....	.....	.....	.....
Climber Six.....S	H.S.	6-3 1/2 x 5	125 1/2	32 x 4 1/2	2250	2250	.....	.....	.....	Piedmont.....4-30	Lyc.	4-3 1/2 x 5	116	32 x 3 1/2	970	.....	.....	.....	.....
Cole.....870	North	8-3 1/2 x 5 1/2	127	33 1/2 x 5	2550	2550	.....	3695	3695	Piedmont.....6-40	Cont.	6-3 1/2 x 4 1/2	122	32 x 4	1255	.....	.....	.....	.....
Columbia Challenger.....Rut.	Own	6-3 1/2 x 5	115	32 x 4	1475	1475	.....	2350	2350	Pierce-Arrow.....Own	Own	6-4 x 5 1/2	138	33 x 5	7000	6500	6500	6000	8100
Columbia.....D-C&S	Cont.	6-3 1/2 x 4 1/2	115	32 x 4	1475	1475	.....	2350	2350	Pilot.....6-45	Teetor	6-3 1/2 x 5	120	32 x 4	1945	1895	2235	3350	3400
Comet.....C-53	Cont.	6-3 1/2 x 5 1/2	125	33 x 4 1/2	2350	2450	.....	4500	4500	Pilot.....6-50	H.S.	6-3 1/2 x 5	128	32 x 4 1/2	2285	2285	2335	3350	3400
Commonwealth.....44	H.S.	4-3 1/2 x 5	117	32 x 4	1395	1395	.....	.....	.....	Porter.....40	Own	4-4 1/2 x 6 1/2	142	33 x 5	6780	Chassis Price	.....	.....	.....
Crawford.....21-6-40	Cont.	6-3 1/2 x 5 1/2	122 1/2	33 1/2 x 5	3000	3000	.....	.....	.....	Premier.....6-D	Own	6-3 1/2 x 5 1/2	126 1/2	33 x 5	3790	13690	4690	5100	.....
Crew-Ekhart.....L-63-65	Lyc.	4-3 1/2 x 5	117	32 x 4	1195	1295	.....	2395	2395	Premecar.....6-40 A	Falls	6-3 1/2 x 5 1/2	117 1/2	33 x 4	1295	1295	.....	.....	.....
Crew-Ekhart.....S-63-65	H.S.	6-3 1/2 x 5	117	33 x 4	1545	1545	.....	.....	.....	Raleigh.....A-6-60	H.S.	6-3 1/2 x 5	122	32 x 4 1/2	2250	2250	3100	3200	.....
Daniels.....D-19	Own	8-3 1/2 x 5 1/2	132	34 x 4 1/2	5350	5350	6250	6950	6950	R & V Knight.....R	Own	4-3 1/2 x 5	116	32 x 4	2150	2150	2850	2850	.....
Davis.....61-67	Cont.	6-3 1/2 x 5 1/2	120	32 x 4	1195	1895	.....	2795	2795	R & V Knight.....J	Own	6-3 1/2 x 4 1/2	127	32 x 4 1/2	3350	3350	3350	4000	4100
Dispatch.....Wisc.	Own	4-3 1/2 x 5	120	34 x 4	1250	1350	.....	1525	1575	Ree.....T-6	Own	6-3 x 5	120	32 x 4	1650	1650	2700	2700	.....
Dodge Flyer.....H-S-70	H.S.	4-3 1/2 x 5	112	32 x 4	1445	1445	.....	2295	2345	Reverie.....C	Dues.	4-4 1/2 x 6	181	32 x 4 1/2	4650	4650	4450	4700	.....
Dodge Brothers.....Own	Own	4-3 1/2 x 4 1/2	114	32 x 4	935	985	.....	1585	1785	Reverie.....6-54-E	Cont.	6-3 1/2 x 5 1/2	128	32 x 4 1/2	2750	2650	3350	3400	.....
Doris.....6-80	Own	6-4 x 5	122	33 1/2 x 5	14785	4785	5800	6690	6690	Reverie.....4-75-E	Own	4-4 1/2 x 6	128	32 x 4 1/2	3550	3550	.....	.....	.....
Dort.....17-12	D-Ly.	4-3 1/2 x 5	108	31 x 4	985	985	.....	1535	1685	Rolls-Royce.....Own	Cont.	6-4 1/2 x 4 1/2	143 1/2	33 x 5	2000	Chassis Price	11760	2450	2750
Driggs.....Own	Own	4-2 1/2 x 4 1/2	100	30 x 3 1/2	1275	1275	.....	1975	1975	Sartan.....125	Own	4-3 1/2 x 5	112	32 x 4	1545	1495	.....	2295	2295
Dupont.....A	Own	4-2 x 5 1/2	124	32 x 4 1/2	3400	3400	.....	4900	4900	Sayers Six.....DP	Cont.	6-3 1/2 x 4 1/2	118	33 x 4	1945	1945	.....	2915	.....
Durant.....A-22	Cont.	4-3 1/2 x 4 1/2	109	31 x 4	890	890	.....	1365	1365	Scripps-Booth.....B-38-42	North	6-2 1/2 x 4 1/2	116	32 x 4	11775	1295	.....	1850	2100
Eicar.....K-4	Lyc.	4-3 1/2 x 5	117	33 x 4	1195	1195	.....	2495	2495	Scripps-Booth.....F-43-46	Cont.	6-3 1/2 x 4 1/2	115	32 x 4	1470	1490	.....	2350	2375
Eicar.....K-4	Cont.	6-3 1/2 x 4 1/2	117	33 x 4	1595	1595	.....	2395	2395	Seneca.....L & O	LeR.	4-3 1/2 x 5	108	30 x 3 1/2	1045	1045	.....	.....	.....
Elgin.....K-1	Falls	6-3 1/2 x 4 1/2	118	33 x 4	1595	1495	.....	2395	2395	Severin.....Six	Cont.	6-3 1/2 x 5 1/2	122 1/2	33 x 4 1/2	1485	1485	.....	2100	2250
Essex.....Own	Own	4-3 1/2 x 5	108 1/2	32 x 4	1375	1375	.....	1890	2230	Severin.....Six	Cont.	6-3 1/2 x 5 1/2	122 1/2	33 x 4 1/2	2550	2550	2550	3250	3350
Fergus.....S-5-21	Own	6-3 1/2 x 5	126	33 x 4 1/2	.....	Chassis Price	8500	.....	.....	Skeldon.....35	Lyc.	4-3 1							

Specifications of Current Motor Truck Models

NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive
				Front	Rear						Front	Rear						Front	Rear	
Acason	1 1/4	\$1650	3 1/2 x 5	34x5	34x5 1/2	W	Corbett, A	3 1/2	\$4100	4 1/2 x 5 1/2	36x5	36x10	W	Gary, J	2 1/2	\$3150	4 1/2 x 5 1/2	36x4	36x7	W
Acason, R	1 1/4	2280	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Corbett, AA	5	5000	4 1/2 x 6	36x6	40x6d	W	Gary, K	3 1/2	4050	4 1/2 x 6	36x5	40x5d	W
Acason, RB	1 1/4	2485	3 1/2 x 5 1/2	36x3 1/2	36x6	W	Cyclone A	1 1/2	2685	3 1/2 x 5	34x5 1/2	36x8	I	Gary, M	5	5150	5 x 6 1/2	36x6	40x6d	W
Acason, H	2 1/2	3295	4 1/2 x 5 1/2	36x4	36x8	W								Gorais M	1 1/2	3100	4 x 5 1/2	36x3 1/2	36x7	W
Acason, L	3 1/2	4295	4 1/2 x 5 1/2	36x5	36x10	W	Dart, S	1 1/2	....	3 1/2 x 5 1/2	34x3 1/2	34x6	W	Gorais K	2 1/2	3500	4 1/2 x 5 1/2	36x4	36x8	W
Acason, M	5	5250	5 x 6 1/2	36x6	40x12	W	Dart, M	2 1/2	....	4 1/2 x 5 1/2	36x4	36x7	W	Gorais	3 1/2	4500	4 1/2 x 6	36x5	40x12	W
Acc, C	1 1/4	2295	3 1/2 x 5 1/2	34x3 1/2	34x5	W	Dart, W	3 1/2	....	4 1/2 x 6	36x5	36x10	W	Giant, 15-A	1 1/2	2250	3 1/2 x 5	34x3 1/2	34x5	W
Acme, G	1 1/4	2795	3 1/2 x 5 1/2	36x4	36x7	W	Day-Elder, A	1	2100	3 1/2 x 5	34x3 1/2	34x4	W	Giant, 16	2	3050	4 1/2 x 5 1/2	36x4	36x7	W
Acme, B	1 1/4	....	3 1/2 x 5	35x5 1/2	35x5 1/2	W	Day-Elder, B	1 1/2	2300	3 1/2 x 5	34x3 1/2	34x5	W	Giant, 17	3 1/2	4150	4 1/2 x 5 1/2	36x5	36x5d	W
Acme, F	1 1/4	....	3 1/2 x 5	34x3 1/2	34x5	W	Day-Elder, C	2	2750	4 1/2 x 5 1/2	36x4	36x7	W	Globe D-20	1 1/2	1495	3 1/2 x 5	33x4 1/2	33x4 1/2	B
Acme, A	2	....	4 1/2 x 5 1/2	36x4	36x7	W	Day-Elder, D	3 1/2	3750	4 1/2 x 5 1/2	36x5	36x5d	W	Globe	1	1495	3 1/2 x 5	33x5	33x5	B
Acme, AC	2 1/2	....	4 1/2 x 5 1/2	36x4	36x7	W	Day-Elder, E	5	4250	4 1/2 x 6	36x5	40x6d	W	Golden West, GH	3	5000	4 1/2 x 6	36x7	36x7	W
Acme, C	3 1/2	....	4 1/2 x 5 1/2	36x5	40x10	W	Dearborn, B	1	1700	3 1/2 x 5 1/2	35x5 1/2	35x5 1/2	W	Golden West, G	3 1/2	4500	4 1/2 x 6	36x6	36x6	W
Acme, E	5	....	4 1/2 x 6	36x6	40x12	W	Dearborn, FX	1 1/2	2300	3 1/2 x 5 1/2	34x4	34x5	W	Golden West, H	3 1/2	4500	4 1/2 x 6	36x6	36x6	W
Akr'n Multi-Trk 20	1	1995	4 x 5 1/2	34x5	34x5	B	Dearborn, 48	1 1/2	2180	3 1/2 x 5 1/2	34x4	34x5	W	Golden West, K	7	6000	5 1/2 x 6	36x6	36x6	W
American, 25	2 1/2	3350	4 x 6	36x4	36x4d	W	Defiance, G	1	1695	3 1/2 x 5	35x5 1/2	35x5 1/2	W	Golden West, HA	7	6000	4 1/2 x 6	36x6	36x10	W
American, 40	4	4275	4 1/2 x 6	36x5	36x5d	W	Defiance, D	1 1/2	2550	3 1/2 x 5	35x5 1/2	35x5 1/2	W	Gove, A-1	2 1/2	....	4 1/2 x 5 1/2	36x4	36x7	I
Apex, G	1 1/4	1450	3 1/2 x 5	33x5 1/2	33x5 1/2	I	Defiance, E	2	2275	3 1/2 x 5	35x5 1/2	35x7	I	Graham Bros. A	1 1/2	2495	3 1/2 x 5	35x5 1/2	36x7	I
Apex, D	1 1/4	1915	3 1/2 x 5 1/2	34x3 1/2	34x4	I	DeKalb, E2 1/2	2	2050	4 1/2 x 5 1/2	36x4	36x6	W	Gramm-Bern, 10	1 1/2	1495	3 1/2 x 5	33x5 1/2	33x5 1/2	D
Apex, E	2 1/2	2695	4 1/2 x 5 1/2	36x4	36x7	I	DeKalb, E2	2 1/2	2250	4 1/2 x 5 1/2	34x3 1/2	36x5	W	Gramm-Bern, 15	1 1/2	2050	3 1/2 x 5	36x3 1/2	36x5	I
Apex, F	3 1/2	3975	4 1/2 x 6	36x5	36x10	I	DeMartini 1 1/2	2 1/2	2600	3 1/2 x 5	34x3 1/2	34x6	W	Gramm-Bern, 65	1 1/2	2725	3 1/2 x 5	36x3 1/2	36x5	W
Armstrong, 20	1 1/4	....	3 1/2 x 5 1/2	36x4	36x7	W	DeMartini 2	2	3300	4 x 5 1/2	36x3 1/2	36x7	W	Gramm-Bern, 20	2	3175	4 1/2 x 5 1/2	36x4	36x7	W
Armstrong, HW	2 1/2	....	4 1/2 x 5 1/2	36x4	36x7	W	DeMartini 3	3	4250	4 1/2 x 6	36x4	36x10	W	Gramm-Bern, 25	2 1/2	3575	4 1/2 x 5 1/2	36x4	36x7d	W
Armstrong, KW	3 1/2	....	4 1/2 x 6	36x5	36x5d	W	DeMartini 4	4	4800	4 1/2 x 6	36x5	36x12	W	Gramm-Bern, 35	3 1/2	4375	4 1/2 x 6	36x5	40x5d	W
Atco, B	1 1/4	....	3 1/2 x 5 1/2	34x5	36x7	W	Denby, 31	1 1/2	1625	3 1/2 x 5	35x5	35x5	B	Gramm-Bern, 50	5	5275	4 1/2 x 6	36x6	40x6d	W
Atco, BI	1 1/4	....	3 1/2 x 5 1/2	34x5	36x7	W	Denby, 33	1 1/2	2300	3 1/2 x 5	35x5 1/2	35x7	I	Hahn, J4	1	....	3 1/2 x 5	34x5	34x5	W
Atlas, A	2 1/2	....	4 1/2 x 5 1/2	36x4	36x8	W	Denby, 34	2	2600	3 1/2 x 5	36x3 1/2	36x6	I	Hahn, CD	1 1/2	....	4 1/2 x 5 1/2	36x4	36x8	W
Atlas, M.D	1	1550	3 1/2 x 5	32x4 1/2	32x4 1/2	I	Denby, 25	3	3300	4 1/2 x 5 1/2	36x4	36x7	I	Hahn, EE	2 1/2	....	4 1/2 x 5 1/2	36x4	36x8	W
Atterbury, 20R	1 1/4	2775	3 1/2 x 5	34x3 1/2	34x5	W	Denby, 27	4	4200	4 1/2 x 5 1/2	36x5	36x5d	I	Hahn, F	3 1/2	....	4 1/2 x 5 1/2	36x5	36x10	W
Atterbury, 7CX	2 1/2	3375	4 1/2 x 5 1/2	36x4	36x4d	W	Denby, 210	5	4850	4 1/2 x 5 1/2	36x6	40x6d	I	Hahn, EF	5	....	4 1/2 x 6	36x6	40x12	W
Atterbury, 7D	3 1/2	4175	4 1/2 x 5 1/2	36x5	40x5d	W	Dependable, A	3 1/2	1650	3 1/2 x 5 1/2	34x5	36x6	W	Hal Fur, E	1	2350	4 x 5	35x5 1/2	35x5 1/2	W
Atterbury, 8E	5	5575	4 1/2 x 6	36x6	40x6d	W	Dependable, C	1 1/2	2350	3 1/2 x 5 1/2	34x3 1/2	34x5	W	Hal Fur, F	2 1/2	3250	4 1/2 x 5 1/2	35x5 1/2	38x7	W
Autocar, 21UF	1 1/2	2300	3 1/2 x 5 1/2	34x4	34x5	D	Dependable, D	2	2650	4 x 5 1/2	34x5	36x6	W	Hall	1 1/2	3100	3 1/2 x 5	34x5 1/2	34x7	W
Autocar, 21UG	1 1/2	2400	3 1/2 x 5 1/2	34x4	34x5	D	Dependable, E	2 1/2	2950	4 1/2 x 5 1/2	36x4	36x7	W	Hall	2 1/2	3275	4 1/2 x 5 1/2	36x4	36x6	W
Autocar, 26Y	1 1/2	4350	4 1/2 x 5 1/2	34x6	36x12	D	Dependable, G	3 1/2	3550	4 1/2 x 6	36x6	36x7	W	Hall	3 1/2	4100	4 1/2 x 5 1/2	36x5	36x5d	W
Autocar, 26B	1 1/2	4500	4 1/2 x 5 1/2	34x6	36x12	D	Diamond-T, O	1	2500	3 1/2 x 5 1/2	34x5 1/2	36x8	W	Hall	5	5100	4 1/2 x 5 1/2	36x5	40x6d	W
Available, H1 1/2	1 1/2	2475	4 x 5 1/2	36x3 1/2	36x5	W	Diamond-T, FS	1 1/2	2900	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Hall	7	5100	4 1/2 x 5 1/2	36x5	40x6d	C
Available, H2	2	2775	4 x 5 1/2	36x3 1/2	36x8	W	Diamond-T, T	2	3285	4 x 5 1/2	36x4	36x7	W	Harvey, WEA	1 1/2	2550	4 1/2 x 5 1/2	34x3 1/2	34x5	W
Available, H2 1/2	2 1/2	3475	4 x 5 1/2	36x4	36x8	W	Diamond-T, U	2 1/2	2650	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Harvey, WFA	2 1/2	2950	4 1/2 x 5 1/2	34x4	34x7	W
Available, H3 1/2	3	4475	4 1/2 x 5 1/2	36x5	40x5d	W	Diamond-T, K	3 1/2	4675	4 1/2 x 5 1/2	36x5	40x5d	W	Harvey, WKA	3 1/2	3950	4 1/2 x 6	36x5	36x5d	W
Available, H5	5	5375	4 1/2 x 6	36x6	40x12	W	Diamond-T, EL	5	5400	4 1/2 x 6	36x6	40x6d	W	Hawkeye, K	1 1/2	1850	3 1/2 x 5 1/2	34x3 1/2	34x5	I
Available, H7	7	6000	5 x 6	36x6	40x14	B	Diamond-T, S	5	6650	4 1/2 x 6	36x6	40x6d	W	Hawkeye, M	2	2650	4 1/2 x 6	36x5	36x10	I
Avery	1	....	3 x 4	34x5 1/2	34x5 1/2	I	Diehl, A	1	....	3 1/2 x 5	34x4 1/2	35x5	I	Hawkeye, N	3 1/2	3700	4 1/2 x 6	36x5	36x7	W
							Diehl, B	1 1/2	....	3 1/2 x 5	36x6	36x6	I	Hendrickson, N	2 1/2	3150	4 1/2 x 5 1/2	36x5	36x5d	W
Beck, A. Jr.	1	1950	3 1/2 x 5	34x3 1/2	34x4	I	Diehl, F	1 1/2	1350	3 1/2 x 5	34x4 1/2	34x4 1/2	I	Hendrickson, M	3 1/2	3975	4 1/2 x 5 1/2	36x5	36x5d	W
Beck, C	2	2550	4 1/2 x 5 1/2	36x4	36x6	I	Dispatch, F	2 1/2	4100	4 1/2 x 5 1/2	36x5	36x5d	C	Highway, Knight A	4	....	4 x 6	36x5	40x6d	W
Beck, M	1 1/4	1650	3 1/2 x 5 1/2	35x5	35x5 1/2	I	Doane	2 1/2	5100	4 1/2 x 5 1/2	36x6	40x6d	C	Highway, Knight B	5	....	4 x 6	36x5	40x6d	W
Beck, E	2 1/2	2250	4 1/2 x 5 1/2	3																

Specifications of Current Motor Truck Models—Continued

NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive
				Front	Rear						Front	Rear						Front	Rear	
Kelly-S, K-45	4	\$4550	4 1/2 x 8 1/2	36x5	40x6 1/2	C	Ogden, E	2 1/2	\$3250	4 1/2 x 8 1/2	36x4	36x7	W	Signal, NF	1	2475	4 1/2 x 5	34x5 1/2	36x8 1/2	W
Kelly-S, K-50	4	4900	4 1/2 x 8 1/2	36x6	40x6 1/2	C	Old Hickory, W	1	2175	3 1/2 x 5	36x3 1/2	36x4	W	Signal, H	1 1/2	2925	4 1/2 x 5 1/2	34x4	36x6	W
Kelly-S, K-60	6	5100	4 1/2 x 8 1/2	36x8	40x7 1/2	C	Old Reliable, A	1 1/2	2350	4 x 5	34x4	36x6	W	Signal, J	2 1/2	3275	4 1/2 x 5 1/2	34x4	36x8	W
Keystone, 40	2	2450	3 1/2 x 5 1/2	34x5 1/2	38x7 1/2	I	Old Reliable, B	2 1/2	3500	4 1/2 x 6	34x4	36x4 1/2	W	Signal, M	3 1/2	4275	4 1/2 x 5 1/2	36x5	40x5 1/2	W
Kimball, AB	2	3675	4 x 6	36x4	36x7	W	Old Reliable, C	3 1/2	4250	4 1/2 x 6	36x5	36x5 1/2	W	Signal, R	5	5300	4 1/2 x 6	36x6	40x6 1/2	W
Kimball, AC	2 1/2	3975	4 1/2 x 6	36x4	36x8	W	Old Reliable, D	5	5250	4 1/2 x 6	36x6	40x6 1/2	W	Southern, 10	1	2090	3 1/2 x 5	34x3 1/2	34x4	W
Kimball, AK	4	4500	4 1/2 x 6	36x4	36x10	W	Old Reliable, KLM	7	6000	4 1/2 x 6 1/2	36x6	40x7 1/2	C	Southern, 15	1 1/2	2590	3 1/2 x 5 1/2	36x6 1/2	34x4	W
Kimball, AE	3 1/2	5000	4 1/2 x 6	36x5	40x12	W	Oldsmobile Econ.	1	1095	3 1/2 x 5 1/2	35x5 1/2	35x5 1/2	W	Southern, 20	2	2990	4 1/2 x 5 1/2	36x6 1/2	40x8	W
Kimball, AF	5	5975	5 x 6	36x6	40x12 1/2	W	Olympic, A	2 1/2	3500	4 1/2 x 5 1/2	36x4	36x7	W	Standard, 1-K	1-1 1/2	1950	3 1/2 x 5	34x3 1/2	34x5	W
Kissel, Express	1	1985 1/2	3 1/2 x 5 1/2	34x5 1/2	34x5 1/2	W	Onida, A-9	1 1/2	2350	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Standard, 76	2 1/2	3100	4 1/2 x 5 1/2	36x4	36x7	W
Kissel, Utility	1 1/2	2775	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Onida, B-9	1 1/2	2915	4 x 5 1/2	36x4	36x7	W	Standard, 66	3 1/2	4000	4 1/2 x 5 1/2	36x5	36x10	W
Kissel, Freight	2 1/2	3475	4 1/2 x 5 1/2	36x4	36x7	W	Onida, C-9	2 1/2	3390	4 x 5 1/2	36x4	36x7	W	Standard, 5-K	5-7	5250	4 1/2 x 6	36x6	40x12	W
Kissel, H. D.	4	4475	4 1/2 x 5 1/2	36x5	36x5 1/2	W	Onida, D-9	3 1/2	4345	4 1/2 x 5 1/2	36x5	36x10	W	Sterling, 1 1/2	1 1/2	3200	4 x 5 1/2	36x3 1/2	36x5	W
Kloiber, AA	1	2600	4 1/2 x 5 1/2	34x3 1/2	34x5	W	One da, E-9	5	5460	4 1/2 x 5 1/2	36x6	40x12	W	Sterling, 2	2	3500	4 x 5 1/2	36x4	36x6	W
Kloiber, A	1 1/2	3100	4 1/2 x 5 1/2	36x2 1/2	36x6	W	Oshkosh, A	2	3750	3 1/2 x 5	36x6 1/2	36x6 1/2	4	Sterling, 2 1/2	2 1/2	3650	4 1/2 x 5 1/2	36x4	36x4 1/2	W
Kloiber, BB	2	3600	4 1/2 x 5 1/2	36x4	36x7	W	Oshkosh, AA	2	3850	3 1/2 x 5	36x6 1/2	36x6 1/2	4	Sterling, 3 1/2	3 1/2	4650	4 1/2 x 5 1/2	36x5	40x5 1/2	W
Kloiber, B	2 1/2	3950	4 1/2 x 5 1/2	36x5	36x8	W	Oshkosh, B	2 1/2	4150	4 x 5 1/2	38x7 1/2	38x7 1/2	4	Sterling, 5-W	5	5500	5 x 6 1/2	36x6	40x6 1/2	W
Kloiber, C	3 1/2	4600	4 1/2 x 5 1/2	36x5	36x5 1/2	W	Oshkosh, BB	2 1/2	4300	4 x 5 1/2	38x7 1/2	38x7 1/2	4	Sterling, 5-C	5	6000	5 x 6 1/2	36x6	40x6 1/2	C
Kloiber, D	5	5300	5 x 6 1/2	36x6	40x12	W	Packard, EC	...	3500	4 1/2 x 5 1/2	36x4	36x7	W	Sterling, 7 1/2	7 1/2	6500	5 x 6 1/2	36x6	40x7 1/2	W
Koehler, D	1 1/2	1885	3 1/2 x 5	34x3 1/2	34x5	W	Packard, ED	...	4100	4 1/2 x 5 1/2	36x5	36x5 1/2	W	Stewart, 14	14	1395	3 1/2 x 5 1/2	32x4 1/2	32x4 1/2	I
Koehler, M	2 1/2	2875	4 x 5 1/2	36x4	36x7	W	Packard, EF	...	4500	5 x 5 1/2	36x6 1/2	40x6 1/2	W	Stewart, 15	15	1875	3 1/2 x 5	35x5 1/2	35x5 1/2	I
Koehler, MCS	3 1/2	2975	4 x 5 1/2	36x4	36x7	W	Packard, EX	...	4000	4 1/2 x 5 1/2	36x6 1/2	40x6 1/2	W	Stewart, 20	1 1/2	2200	3 1/2 x 5	34x3 1/2	34x5	I
Koehler, F	3 1/2	3995	4 1/2 x 5 1/2	36x5	36x10	W	Paige, 52-19	1 1/2	2880	4 x 5 1/2	34x3 1/2	34x5	W	Stewart, 7	2	2800	4 1/2 x 5 1/2	34x4	34x7	I
Koehler, MT, Trac	5	2975	4 x 5 1/2	36x4	36x7	W	Paige, 54-20	2 1/2	3400	4 1/2 x 5 1/2	34x4	34x8	W	Stewart, 7-X	2 1/2	2950	4 1/2 x 5 1/2	34x4	34x7	I
L.M.C., C-20	2 1/2	2540	4 1/2 x 5 1/2	36x4	36x4 1/2	I	Paige, 51-18	3 1/2	4285	4 1/2 x 5 1/2	36x5	36x5 1/2	W	Stewart, 10	3 1/2	3850	4 1/2 x 5 1/2	36x5	36x5 1/2	I
Lange, B	2 1/2	3350	4 x 5 1/2	36x4	36x6	C	Parker, F20	2	3500	4 x 6	34x4	36x4 1/2	W	Stewart, 10-X	3 1/2	3850	4 1/2 x 5 1/2	36x5	36x5 1/2	I
Larrabee, XZ	3 1/2	1925	3 1/2 x 5	34x5 1/2	34x5 1/2	B	Parker, J20	3 1/2	4400	4 1/2 x 6	36x5	40x5 1/2	W	Stoughton, A	1	1995	3 1/2 x 5 1/2	34x4 1/2	35x5 1/2	W
Larrabee, UZ	1 1/2	2100	3 1/2 x 5	34x3 1/2	34x5	W	Parker, M20	5	5500	4 1/2 x 6	36x6	40x6 1/2	W	Stoughton, B	1 1/2	2350	3 1/2 x 5 1/2	36x3 1/2	36x5	W
Larrabee, SK	3 1/2	3200	4 1/2 x 5 1/2	36x4	36x7	W	Patriot, Revora	3 1/2	1785	3 1/2 x 5	35x5 1/2	35x5 1/2	W	Stoughton, C	3 1/2	1240	3 1/2 x 5	34x4 1/2	34x4 1/2	W
Larrabee, FL	3 1/2	4000	4 1/2 x 5 1/2	36x5	36x5 1/2	W	Patriot, Lincoln	1 1/2	2450	4 x 5 1/2	34x3 1/2	34x5	W	Stoughton, D	2	2800	4 x 5 1/2	36x4	36x7	W
Larrabee, FW	5	4900	4 1/2 x 5 1/2	36x6	40x6 1/2	W	Patriot, Wash'tn	2 1/2	2450	4 1/2 x 5 1/2	36x4	36x7	W	Stoughton, F	3	3600	4 1/2 x 5 1/2	36x5	36x5 1/2	W
Lion, L	1 1/2	2350	3 1/2 x 5 1/2	35x5 1/2	35x5 1/2	W	Piedmont, 4-30	1 1/2	1685	3 1/2 x 5	34x4 1/2	34x4 1/2	W	Sullivan, E	2	3350	4 1/2 x 5 1/2	36x4	36x7	W
Luedinghaus, C	1 1/2	2100	3 1/2 x 5 1/2	35x5 1/2	35x5 1/2	W	Pierce-Arrow	2	3200	4 x 5 1/2	36x4	36x4 1/2	W	Sullivan, H	3 1/2	4050	4 1/2 x 6	36x5	36x5 1/2	W
Luedinghaus, W	1 1/2	2700	3 1/2 x 5 1/2	34x3 1/2	34x5	W	Pierce-Arrow	3 1/2	4350	4 1/2 x 5 1/2	36x5	36x5 1/2	W	Superior, D	1	1650	3 1/2 x 5	34x4 1/2	34x4	I
Maccar, L	1 1/2	2925	4 1/2 x 5 1/2	36x4	36x6	W	Pierce-Arrow	5	4850	4 1/2 x 5 1/2	36x5	40x6 1/2	W	Superior, E	2	2600	4 1/2 x 5 1/2	36x4	36x6	W
Maccar, H-2	2 1/2	3650	4 1/2 x 5 1/2	36x5	36x4 1/2	W	Pioneer, 50	1	1550	3 1/2 x 4 1/2	32x4 1/2	32x4 1/2	W	Super Truck, 50	2 1/2	3300	4 x 6	36x4	36x8	W
Maccar, M-2	2 1/2	4000	4 1/2 x 5 1/2	36x5	36x5 1/2	W	Pittsburgh, C-21	2 1/2	3500	4 1/2 x 5 1/2	36x5	36x7	W	Super Truck, 70	3 1/2	4300	4 1/2 x 6	36x5	40x5 1/2	W
Maccar, G	7 1/2	5500	4 1/2 x 6	36x5	40x6 1/2	W	Pony	3 1/2	400	2 1/2 x 4	28x3 1/2	28x3 1/2	C	Super Truck, 100	5	5300	4 1/2 x 6	36x5	40x12	W
MacDonald, A	7 1/2	5750	4 1/2 x 6	36x5	40x6 1/2	W	Power, F	1 1/2	...	3 1/2 x 5 1/2	36x6	36x6	W	Super Truck 150	7 1/2	6300	5 x 6	36x6	40x7 1/2	W
Mack, AB D.R.	1 1/2	3450	4 x 5	36x4	36x3 1/2	D	Power, C	3 1/2	...	3 1/2 x 5 1/2	36x5	40x10	W	Texan, A38	3 1/2	1095	3 1/2 x 5	33x4	33x4	I
Mack, AB	2 1/2	3400	4 x 5	36x4	36x4	C	Preocar, B-143	3 1/2	2475	3 1/2 x 5	36x6 1/2	36x6 1/2	W	Tiffin, TK30	1 1/2	1550	3 1/2 x 5	33x4	33x4	I
Mack, AB Chain	3	3000	4 x 5	36x4	36x3 1/2	C	Ramier, R-11	3 1/2	2150	3 1/2 x 5	35x5 1/2	35x5 1/2	W	Tiffin, GW	1 1/2	2400	4 1/2 x 5 1/2	36x3 1/2	36x5	W
Mack, AB Chain	3 1/2	3300	4 x 5	36x4	36x4 1/2	C	Ramier, R-16	1 1/2	2350	3 1/2 x 5	34x3 1/2	31x4	W	Tiffin, MW	2 1/2	3100	4 1/2 x 5 1/2	36x4	36x3 1/2	W
Mack, AB D.R.	3 1/2	3750	4 x 5	36x4	36x4 1/2	D	Ramier, R-19	1 1/2	2600	3 1/2 x 5	34x3 1/2	34x5	W	Tiffin, PW	3 1/2	4100	4 1/2 x 5 1/2	36x5	40x5 1/2	W
Mack, AC Chain	3 1/2	4950	5 x 6	36x5	40x5 1/2	C	Ramier, R-18	2	2950	4 1/2 x 5 1/2	34x4	34x6	W	Tiffin, F50	5	4800	4 1/2 x 6	36x6	40x6 1/2	W
Mack, AC Chain	6 1/2	5500	5 x 6	36x6	40x6 1/2	C	Ramier, R-15	3 1/2	4500	4 1/2 x 5 1/2	36x5	36x5 1/2								

Specifications of Current Motor Truck Models—Continued

NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive					
				Front	Rear						Front	Rear						Front	Rear						
Watson, B	1	\$1885	3 1/2 x 5 1/2	35x5 1/2	35x5 1/2	W	Wichita, S	5	\$5000	4 1/2 x 6	36x6	40x6d	W	Winther, 39	1 1/2	\$2450	3 1/2 x 5	34x3 1/2	34x5	J					
Watson, N	3 1/2	4250	4 1/2 x 5 1/2	36x5	36x10	W	Wilcox, AA	1	2100	3 1/2 x 5 1/2	36x4	36x4	W	Winther, 49	2	3250	4 x 5	34x4	34x4d	J					
Western, W 1 1/2	1 1/2	2550	4 1/2 x 5 1/2	36x3 1/2	36x5	W	Wilcox, B	1 1/2	2775	4 1/2 x 5	36x4	36x5	W	Winther, 50	2 1/2	3995	4 x 6	38x7 1/2	42x8 1/2	J					
Western, L 1 1/2	1 1/2	2550	3 1/2 x 5	36x3 1/2	36x5	W	Wilcox, D	2 1/2	3300	4 1/2 x 5	36x4	36x3 1/2	W	Winther, 70	3 1/2	4200	4 x 6	36x5	36x5d	J					
Western, W 2 1/2	2 1/2	3250	4 1/2 x 5 1/2	36x4	36x7	W	Wilcox, E	3 1/2	4250	4 1/2 x 6	36x5	36x5d	W	Winther, 450	2 1/2	3690	4 x 5	34x5	36x6	J					
Western, L 2 1/2	2 1/2	3250	4 1/2 x 6	36x4	36x7	W	Wilcox, F	5	5200	4 1/2 x 6 1/2	36x5	40x6d	W	Winther, 109	5	5250	4 1/2 x 6	36x6	40x5d	J					
Western, W 3 1/2	3 1/2	4250	4 1/2 x 6	36x5	40x5d	W	Wilson, G	1 1/2	2270	3 1/2 x 5	36x3 1/2	36x5	W	Winther, 140	7	5900	5 x 6	36x6	40x7d	J					
White, 15	3 1/2	2400	3 1/2 x 5 1/2	34x5 1/2	34x5 1/2	B	Wilson, EA	2 1/2	2425	4 1/2 x 5 1/2	36x4	36x7	W	Wisconsin B	1	1950	4 x 5 1/2	34x5 1/2	34x5 1/2	W					
White, 20	2	3250	3 1/2 x 5 1/2	36x4	36x7	D	Wilson, G	3 1/2	3635	4 1/2 x 5 1/2	36x5	36x5d	W	Wisconsin C	1 1/2	2500	4 1/2 x 5 1/2	36x6 1/2	36x6 1/2	W					
White, 40	3 1/2	4200	3 1/2 x 5 1/2	36x5	40x5d	D	Wilson, H	5	4520	4 1/2 x 6	36x6	40x6d	W	Wisconsin D	2 1/2	3500	4 1/2 x 6 1/2	36x6	36x10	W					
White, 45	5	4500	4 1/2 x 5 1/2	36x6	40x6d	D	Winther, 751	1	1795	3 1/2 x 5	34x4 1/2	35x5 1/2	J	Wisconsin E	3 1/2	4000	5 x 6 1/2	36x6 1/2	36x12 1/2	W					
White Hick., E	1	2450	3 1/2 x 5	34x5 1/2	34x5 1/2	W	Winther, 430	1 1/2	2850	3 1/2 x 5	32x4	32x4	1	Witt-Will, N	1 1/2	2750	3 1/2 x 5	36x3 1/2	36x5 1/2	W					
White Hick., H	1 1/2	2750	3 1/2 x 5	36x3 1/2	36x5	W	*2-cyl. 16-cyl. 18-cyl. All others, not marked,																		
White Hick., K	2 1/2	3350	4 1/2 x 5 1/2	36x4	36x5	W	are 4-cyl. Trac., Tractor. **Canadian made.																		
Wichita, K	1	2300	3 1/2 x 5 1/2	36x3 1/2	36x4	W	Final Drive: W—Worm, I—Internal Gear,																		
Wichita, L	1 1/2	2600	3 1/2 x 5 1/2	36x3 1/2	36x5	W	C—Chain, D—Double Reduction, B—Bevel, 4—																		
Wichita, M	2	2800	3 1/2 x 5 1/2	36x3 1/2	36x6	W	Four-Wheel, E—External Gear. *Tires—optional.																		
Wichita, R	2 1/2	3000	3 1/2 x 5 1/2	36x4	36x7	W	†Pneumatic Tires. All others solid. ††—Price in-																		
Wichita, RX	2 1/2	3600	4 1/2 x 6	36x4	36x8	W	cludes body. \$—Price includes several items of																		
Wichita, O	3 1/2	4000	4 1/2 x 6	36x5	36x5d	W	equipment.																		

Farm Tractor Specifications and Prices

TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Flow Capacity	TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Flow Capacity	TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Flow Capacity
All-In One	16-30	\$1975	3	Clim.	4-5 x 6 1/2	GDK	3-4	Gray... 1920	18-36	\$2000	3	Wauk	4-4 1/2 x 6 1/2	Gas.	4	Port Huron... A	12-25	\$1700	4	Chief	4-4 1/2 x 6	G,K	3
Allis-Chalm. B	6-12	925	2	LeR.	4-3 1/2 x 4 1/2	Gas.	1-2	Ground Hog	18-31	2000	4	Erld.	4-4 x 6	Gas.	4	Prairie Dog... L	9-18	650	3	Wauk	4-3 1/2 x 5 1/2	Gas.	2
Allis-Chalm. G.P.	6-12	850	2	LeR.	4-3 1/2 x 4 1/2	Gas.	1-2	Gt. Western St.	20-30	1950	4	Beav.	4-4 1/2 x 6	Gas.	4	Prairie Dog... D	15-30	1250	4	Wauk	4-4 1/2 x 6 1/2	Gas.	3
Allis-Chalm. L	12-20	1495	2	Mid.W	4-4 1/2 x 5 1/2	G,K	2-3	Hart-Parr... 20	20	995	4	Own	2-5 1/2 x 6 1/2	K,D	2	Ranger Cult.	8-16		4	LeR.	4-3 1/2 x 4 1/2	Gas.	1-4
Allis-Chalm. M	18-70	2150	4	Own	4-4 1/2 x 6 1/2	G,K	3-4	Hart-Parr... 30	30	1595	4	Own	2-6 1/2 x 7	K,D	2	Reed... T-20	15-30	1985	4	Wauk	4-4 1/2 x 6 1/2	G,K	3-4
Allis-Chalm. N	10-18	875	4	Own	4-4 1/2 x 5 1/2	G,K	2-3	Heider... D	9-16	1170	4	Wauk	4-4 1/2 x 5 1/2	G,K	3	Reed... A-1	18-36	2185	4	Wauk	4-5 x 6 1/2	Gas.	4
Allwork... 2-G	14-28	1875	4	Own	4-4 1/2 x 6	G,K	3	Heider... C	12-20	1395	4	Wauk	4-4 1/2 x 6 1/2	G,K	3	Reliable	10-20	885	4	Own	2-6 x 7	Ker.	2
Allwork... C	14-28	1875	4	Own	4-4 1/2 x 6	G,K	3	Heider... Cult	6-10	1050	4	LeR.	4-3 1/2 x 4 1/2	Gas.	1	Rex	12-25	1600	4	Wauk	4-4 1/2 x 5 1/2	G,K	3
Andrews-Kin.D	18-36	2500	4	Clim.	4-5 x 6 1/2	G,K	4	Hicks	20-30	1100	4	4	4-4 1/2 x 6	G,K	3	Russell	12-21	1500	4	Own	4-4 1/2 x 5 1/2	G,K	2-3
Appleton	12-20	1500	4	Buda	4-4 1/2 x 5 1/2	G,K	2-3	Huber Light 4	12-25	1185	4	Wauk	4-4 1/2 x 5 1/2	G,K	3	Russell	15-30	2200	4	Own	4-5 x 6 1/2	G,K	3-4
Are... 1921	3-5	550	4	Own	1-4 1/2 x 5	Gas.	1	Huber Super 4	15-30	1885	4	Midw.	4-4 1/2 x 6	Gas.	3	Russell	20-35	3000	4	Own	4-5 1/2 x 7	G,K	4-5
Aultman-T	15-30	2200	4	Clim.	4-5 x 6 1/2	G,K	4	Illinois Super	18-36	2375	4	Clim.	4-5 x 6 1/2	G,K	4	Samson... M	30-60	5000	4	Own	4-8 x 10	G,K	8-10
Aultman-T	22-45	3650	4	Own	4-5 1/2 x 6 1/2	G,K	6	Imperial... C	40-70	5000	4	Own	4-7 1/2 x 9	G,K,D	10	Sandusky... J	10-20	1250	4	Own	4-4 1/2 x 5 1/2	G,K,D	2
Aultman-T	30-60	5000	4	Own	4-7 x 9	G,K,D	8	Indiana... F	5-10	895	2	LeR.	4-3 1/2 x 4 1/2	Gas.	1-2	Sandusky... E	15-35	1750	4	Own	4-5 x 6 1/2	G,K,D	4
Automot. B-3	12-24	1785	4	Her.	4-3 x 5 1/2	Gas.	2-3	International	8-16	900	4	Own	4-4 1/2 x 5	G,K,D	2	Shawnee Com.	6-12		2	LeR.	4-3 1/2 x 4 1/2	Gas.	10
Avery SR Cult	5-10		4	Own	4-3 x 5 1/2	G,K	2	International	15-30	1740	4	Own	4-4 1/2 x 8	G,K,D	4	Shawnee Con.	9-18		2	Gray	4-3 1/2 x 5	Gas.	3
Avery Cult-C	5-10		4	Own	4-3 x 5 1/2	G,K	2	J-T... N	20-40	3485	2	Chief	4-4 1/2 x 6	G,K,D	3-4	Shelby... D	15-30		4	Beav.	4-4 1/2 x 6	G,K	3
Avery B	8-16		4	Own	2-5 1/2 x 6	G,K,D	2-3	Klumb... F	16-32	1650	4	Clim.	4-5 x 6 1/2	Gas.	4	Shelby... C	10-20		4	Erld.	4-4 x 6	G,K	2-4
Avery C	12-20		4	Own	4-4 1/2 x 6	G,K,D	2-3	Knudsen, 1920	25-45	2500	4	Own	4-5 x 9	Gas	4-6	Short Turn...	20-40	1500	3	Beav.	4-4 x 6	G,K	3
Avery	12-25		4	Own	4-4 1/2 x 6	G,K,D	2-3	LaCrosse... M	6-12	650	4	Own	2-4 x 6	G,K	1	Square T... A	18-35	2075	3	Clim.	4-5 x 6 1/2	G,K	3
Avery	14-28		4	Own	4-4 1/2 x 6	G,K,D	2-3	LaCrosse... G	12-24	985	4	Own	2-6 x 7	G,K	2	Steady Pull...	12-24	1485	4	4	4-4 x 5	Gns.	3
Avery	18-36		4	Own	4-4 1/2 x 6	G,K,D	2-3	LaCrosse... G	12-25	1495	4	Own	4-4 1/2 x 6	G,K	3	Stinson... AE	18-36	1535	4	Beav.	4-4 1/2 x 6	G,K	4
Avery	25-50		4	Own	4-4 1/2 x 6	G,K,D	2-3	LaCrosse... G	12-25	1495	4	Own	4-4 1/2 x 6	G,K	3	Stone	20-40	2250	4	Beav.	4-4 1/2 x 6	G,K	4
Avery	45-65		4	Own	4-4 1/2 x 6	G,K,D	2-3	LaCrosse... G	12-25	1495	4	Own	4-4 1/2 x 6	G,K	3	Toga... 3	15-27	2625	4	Wisc.	4-4 1/2 x 6	Gas.	3-4
Bates	15-25		4	Own	4-4 1/2 x 6	Ker.	3	LaCrosse... G	12-25	1495	4	Own	4-4 1/2 x 6	G,K	3	Titan	10-20	900	4	Own	2-6 1/2 x 8	G,K,D	3
Bates Mule H	15-25		4	Midw	4-4 1/2 x 5 1/2	Gas.	3	LaCrosse... G	12-25	1495	4	Own	4-4 1/2 x 6	G,K	3	Topp... B	30-45	3500	4	Wauk	4-4 1/2 x 6 1/2	Gas.	2-4
Bates Mule F	18-25		2	Midw	4-4 1/2 x 5 1/2	Gas.	3	LaCrosse... G	12-25	1495	4	Own	4-4 1/2 x 6	G,K	3	Tore Cultivator	6-10		3	LeR.	4-3 1/2 x 4 1/2	Gas.	2
Bates Mule G	25-35		2	Midw	4-4 1/2 x 5 1/2	Gas.	3	LaCrosse... G	12-25	1495	4	Own	4-4 1/2 x 6	G,K	3	Townsend	10-20	895	2	Own	4-6 1/2 x 7	Ker.	2-3
Bean	8-10		1	Own	4-3 1/2 x 4	G,K	2-3	LaCrosse... G	12-25	1495	4	Own	4-4 1/2 x 6	G,K	3	Townsend	15-30	1485	2	Own	4-7 x 8	Ker.	2-4
Beeman... G	2-4	315	4	Own	1-3 1/2 x 4 1/2	Gas.	1/2	LaCrosse... G	12-25	1495	4	Own	4-4 1/2 x 6	G,K	3	Townsend	25-50	2750	2	Own	4-7 1/2 x 10	Ker.	4-6
Best	30		2	Own	4-4 1/2 x 6 1/2	G,K,D	4	LaCrosse... G	12-25	1495	4	Own	4-4 1/2 x 6	G,K	3	Traction Meter	40-50		4	...	8 3/4 x 5	Gas.	4-5
Best	60		2	Own	4-4 1/2 x 6 1/2	G,K,D	4	LaCrosse... G	12-25	1495	4	Own	4-4 1/2 x 6	G,K	3	Traylor... TB	6-12	715	4	LeR.	4-3 1/2 x 4 1/2	Gas.	1-2
Boring... 1921	1850		3	Wauk	4-4 1/2 x 5 1/2	G,K	3-4	LaCrosse... G	12-25	1495	4	Own	4-4 1/2 x 6	G,K	3	Triumph... H	18-36	2450	2	Erld.	4-4 x 6	Ker.	4
Burn-Oil 1921	15-30	1650	4	Own	2-6 1/2 x 7	Ker.	3	LaCrosse... G	12-25	1495	4	Own	4-4 1/2 x 6	G,K	3	Trundar... 10	25-40	3750	2	Wauk	4-5 x 6 1/2	G or K	4
Capitol...	15-30	1000	2	Own	4-4 1/2 x 6	Gas.	3	LaCrosse... G	12-25	1495	4	Own	4-4 1/2 x 6	G,K	3	Turner... 1921	14-25	1295	4	Buda	4-4 1/2 x 5 1/2	G,K	3
Case	10-18	1090	4	Own	4-3 1/2 x 5	G,K	2	LaCrosse... G	12-25	1495	4	Own	4-4 1/2 x 6	G,K	3	Twin City...	12-20	1580	4	Own	4-4 1/2 x 6	G,K	3
Case	15-27	1680	4	Own	4-4 1/2 x 6	G,K	3	LaCrosse... G	12-25	1495	4	Own	4-4 1/2 x 6	G,K	3	Twin City...	20-35	3175	4	Own	4-5 1/2 x 6 1/2	G,K	5
Case	22-40	3100	4	Own	4-5 1/2 x 6 1/2	Gas.	4-5	LaCrosse... G	12-25	1495	4	Own	4-4 1/2 x 6	G,K	3	Twin City...	40-65	6250	4	Own	4-7 1/2 x 9	G,K	8
Caterpillar T11	25	4250	2	Own	4-4 1/2 x 6	Gas.	4	LaCrosse... G	12-25	1495	4	Own	4-4 1/2 x 6	G,K	3	Uncle Sam C20	12-20	1335	4	Weid.	4-4 x 5 1/2	G	2-3
Caterpillar T16	40	6500	2	Own	4-6 1/2 x 7	Gas.	6	LaCrosse... G	12-25	1495	4	Own	4-4 1/2 x 6	G,K	3	Uncle Sam B19	20-30	2300	4	Beav.	4-4 1/2 x 6	G or K	3-4
Centaur	5-2 1/2	455	2	N.Way	2-4 1/2 x 4 1/2	G or K	1-9	LaCrosse... G	12-25	1495	4	Own	4-4 1/2 x 6	G,K	3	Uncle Sam D21	20-30	1985	4	Beav.	4-4 1/2 x 6	G or K	3-4
Chase	12-25	1725	3	Buda	4-4 1/2 x 5 1/2	G,K	2-3	LaCrosse... G	12-25	1495	4	Own	4-4 1/2 x 6	G,K	3	Universal...	1-4	475	2	Own	1-3 1/2 x 5	G	1
Chicago 40	40	2500	4	Own	4-4 1/2 x 6	Gas.	4	LaCrosse... G	12-25	1495	4	Own	4-4 1/2 x 6	G,K	3	Utilitor... 501	2 1/2 x 4	380	4	Own	1-3 1/2 x 4 1/2	G	1
Cletrac... F	9-16	845	2	Own	4-3 1/2 x 4 1/2	G,K,D	2-3	LaCrosse... G	12-25	1495	4	Own	4-4 1/2 x 6	G,K	3	Valie... Biltwell	12-24	1750	4	Own	4-4 1/2 x 5 1/2	G,K,D	3
Cletrac... W	12-20	1495	2	Own	4-4 x 5 1/2	G,K,D	2-3	LaCrosse... G	12-25	1495	4	Own	4-4 1/2 x 6	G,K	3	Victory... 1921	9-18	1350	4	Gray.	4-3 1/2 x 5	Gas.	2
Dakota...	15-27	1750	3	Dom.	4-4 1/2 x 6	Gas.	3	LaCrosse... G	12-25	1495	4	Own	4-4 1/2 x 6	G,K	3	Victory... 1921	15-30	1750	4	Wauk	4-4 1/2 x 6 1/2	Gas.	3
Dart... B.J.	15-30	2100	4	Buda	4-4 1/2 x 6	Gas.	3-4	LaCrosse... G	12-25	1495	4	Own	4-4 1/2 x 6	G,K	3	Vim... B	15-30	1650	4	Wauk	4-4 1/2 x 6 1/2	G,K	3
Depue...	20-30	2500	4	Buda	4-4 1/2 x 6	Gas.	3-4	LaCrosse... G	12-25	1495	4	Own	4-4 1/2 x 6	G,K	3	Wallis... K	15-25	1600	4	Own	4-4 1/2 x 5 1/2	G,K	3
Dill...	20	2180	4	Cont.	4-4 1/2 x 5 1/2	Gas.	3	LaCrosse... G	12-25	1495	4	Own	4-4 1/2 x 6	G,K	3	Waterloo... N	12-25	1450	4	Own	2-6 1/2 x 7	G,K	3
Dill... R.W.	20	2980	4	Midw	4-4 1/2 x 6	Gas.	3	LaCrosse... G	12-25	1495	4	Own	4-4 1/2 x 6	G,K	3	Webfoot... 53	28-53	5000	4	Wisc.	4-5 1/2 x 7	G,D	6
Do-It-All	-7	595	1	Own	1-4 1/2 x 5	Gas.	1	LaCrosse... G	12-25	1495	4	Own	4-4 1/2 x 6	G,K	3	Wellington... F	10-30	1400	4	Erld.	4-4 x 6	Ker.	2-3
Doyle... F	12-22	1100	4	Own	2-7 x 8	G,K	3-4	LaCrosse... G	12-25	1495	4	Own	4-4 1/2 x 6	G,K	3	Western... 1920	16-32	2100	4	Chief	4-4 1/2 x 6	Ker.	3-4
Earle... F	16-30	1450	4	Own	2-8 x 8	G,K	4-5	LaCrosse... G	12-25	1495	4	Own	4-4 1/2 x 6	G,K	3	Wetmore...	12-25	1650	4	Clim.	4-5 1/2 x 6	Gas.	4
E-B... AA	12-20	1445	4	Own	4-4 1/2 x 5	G,K,D	3	LaCrosse... G	12-25	1495	4	Own	4-4 1/2 x 6	G,K	3	Wharton... E	12-20	1800	4	Wauk	4-4 x 5 1/2	G,K	3
E-B... Q	12-20	925	4	Own	4-4 1/2 x 5	G,K,D	3	LaCrosse... G	12-25	1495	4	Own	4-4 1/2 x 6	G,K	3	Whitney...	9-18		4	Own	2-5 1/2 x 6 1/2	Gas.	2-4
E-B...	16-32	2000	4	Own	4-5 1/2 x 7	G,K,D	4	LaCrosse... G	12-25	1495	4	Own	4-4 1/2 x 6	G,K	3	Wichita... T	15-30	2500	4	Beav.	4-4 1/2 x 6	G,K,D	3
Evans	18-30	2000	4	Buda	4-4 1/2 x 6	G,K	3	LaCrosse... G	12-25	1495	4	Own	4-4 1/2 x 6	G,K	3	Wisconsin... E	16-30	2250	4	Clim.	4-5 x 6 1/2	G,K	3
Fageol... D	9-12	1525	4	Lye.	4-3 1/2 x 5	Gas.	2	LaCrosse... G	12-25	1495	4	Own	4-4 1/2 x 6	G,K	3	Wisconsin... F	20-40	2450	4	Wauk	4-5 x 6 1/2	G,K	4
Farm Horse B	18-30	1885	4	Clim.	4-4 1/2 x 6 1/2	G,K	3-4	LaCrosse... G	12-25	1495	4	Own	4-4 1/2 x 6	G,K	3	Wisconsin... H	22-40	2800	4	Clim.	4-5 1/2 x 7	G	

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Why Not in Your Town, Too?



Show Managers Endorse Enclosed Car Week

National Association Gets Behind the Movement—Six Big Cities Will Observe Week and Others Are Considering It

Appreciation Day and Automotive Equipment Day Named for Winter Shows—Managers Discuss Merchandising Methods and Find Buying Power on the Gain

By NEAL ADAIR

Chicago, Sept. 16.

BUYING power is gaining strength and confidence throughout the country, and sales promotional activities will direct its attention to the products of the automotive industry.

This is the consensus of opinion of automobile show and trade association managers from North, East, West and South, who concluded here to-day a two-day discussion of automobile merchandising and trade co-operation.

The managers heard a banker, a merchandising executive and a real estate man—all men with national vision based on nation-wide sources of information—tell of steadily improving conditions in business and the inability and inclination of people to buy. Then they indorsed the Enclosed Car Week and the Automobile Show as means of helping to turn this ability and inclination to buy, as it concerns automobiles, into profits for automobile merchants.

THE managers also discussed, with generally favorable opinions, the value of institutional or confidence-building advertising, in addition to commodity advertising, as an agency in broadening the sale of automobiles.

The meeting was the early fall convention of the National Association of Automobile Show and Association Managers. The association established a precedent by going outside the industry for its speakers, listening to men from a Chicago bank, from a great Chicago mercantile institution and from the National Association of Real Estate Boards on merchandising and association subjects. These men brought out ideas in merchandising and in co-operative organization work which the show and association managers have taken home for application to the problems of their associations and the dealers comprising them.

Though the convention was one primarily for exchange of ideas, it went into definite action on several subjects.

1—The association approved the holding of Enclosed Car Week by co-

operative action of dealers in their own cities, as a means of stimulating interest in enclosed cars and auto-

These Cities Are Going to Have an Enclosed Car Week This Fall

Kansas City	Oct. 8-15
Detroit	Oct. 8-15
Syracuse	Oct. 15-22
Buffalo	Oct. 15-22
Rochester	Oct. 24-29
Brooklyn	Oct. 24-29

Are You?

Send in Your Dates to Motor World
Many other cities are going to hold fall shows of enclosed cars or of cars generally, and in some cases of cars, used cars, trucks, tractors and accessories. Are YOU? Send in your dates to Motor World.

mobiles generally, giving the fall buying season an earlier start and getting momentum for all-winter sales of the type of cars most easily sold in cold weather. Representa-

tives of six dealer associations in large cities announced decisions to hold an Enclosed Car Week in October.

2—The association restated its approval of mid-winter and spring shows as agencies of sales promotion, advocated the most aggressive possible promotion of the shows, and, as a means of injecting novelty into the show season, recommended an Appreciation Day and an Automotive Equipment Day during all show weeks.

3—The association promised its support of the Merchandising Campaign undertaken by the Automotive Equipment Association.

With the fall season at hand, the show managers turned their first attention to possibilities of fall sales promotion of passenger cars. E. E. Peake of Kansas City, president of the association, expressed the sentiment of the convention when he declared the time was ripe for public attention-compelling activities by dealer associations to give the fall buying season a vigorous start. He declared the Enclosed Car Week, with individual shows in individual salesrooms, co-operatively advertised, was the most practical idea brought forward. He urged that all

associations holding one call it National Enclosed Car Week, giving the occasion greater advertising value. He advocated this regardless of the fact that climatic and other conditions will prevent the simultaneous observance of the week. Give the movement a national name, he said; try it out this fall and, if results warrant employment of the same or a similar idea next year, it may be made national in fact as well as in name, with the whole industry supporting it.

Peake declared that the dealers of Kansas City were going to push right ahead, facing conditions as they are and making the most of the interest which can be aroused in automobiles with such an observance as the Enclosed Car Week. He said that association money as well as individual dealers' funds would be used to promote the week and that there would be a strong campaign of co-operative advertising of the event. Salesrooms will be open evenings, with special decorations, some streets will be roped off, with police permission, to compel traffic to pass through Motor Row, and there will be every evening an enclosed car parade, headed by a band. Peake said the week would convince the business community and the general public that the automobile business was far from "dead and buried"—and unquestionably would sell not only enclosed cars but open cars as well. In the case of dealers with salesrooms on streets other than the main automobile sales thoroughfare, Peake said arrangements would be made to accommodate some of their cars in the buildings of fellow association members on the Row.

Following Peake, six other managers announced plans for Enclosed Car Week in their cities, and the rest of the membership, generally approving the idea, said that reports of the discussion would be laid before their associations, with likelihood of favorable action on the idea in several cases.

Members of the Show Managers' Association, all experienced in show and sales promotion work, got back of the Enclosed Car Week idea because of its practical worth in stimulating interest and sales this fall. Stimulation is needed in every city, for its effect on the spirit of automobile sales organizations—on dealers' and salesmen's morale—as well as for the direct effect on sales. Would an Enclosed Car Week help in your city?

How to Promote Special Show Days

The suggestion for Appreciation Day at the winter shows was made by President Peake, who described its success last February in Kansas City. It was held on Thursday in place of Society Day, Peake said, after he had appeared before five civic organizations such as the Chamber of Commerce, telling them of the importance of the automobile industry in the business life of the city. Facts and figures presented, he said, proved a revelation to some of these organizations and their members, along with the newspapers, became active in promoting the Appreciation Day idea and the show.

Ray W. Sherman, merchandising director of the Automotive Equipment Association, suggested Automotive Equip-

ment Day as a special show feature. He said it would foster co-operation between the passenger car and equipment branches of the industry and would assist the countrywide sales promotion plan of his association. He said members of his organization probably would be able to address jobber and dealer organizations at some of the shows.

Co-Operation on Used Car Troubles

Most of the managers reported troublesome used car situations prompted by price reductions and by failure of individual dealers to look at their used stocks

Why Not Have Appreciation Day Automotive Equipment Day at Your Show Next Winter?

THE National Association of Automobile Show and Association Managers voted at their Chicago meeting to endorse the ideas of the two special "days" named above for automobile shows of the season of 1921-22.

Appreciation Day, suggested in place of Society Day which has prevailed at many shows, was held last winter in Kansas City when the people of the great Middle Western center, turning out to show their appreciation of what the automotive industry had done and was doing for the territory, gave the show the largest single day's attendance in the history of Kansas City automotive expositions.

Automotive Equipment Day, endorsed in recognition of the importance of automotive equipment manufacturing and merchandising as a factor in the progress of the industry, is suggested as a day when special attention can be called to the equipment exhibits and when manufacturers, jobbers and dealers can arrange meetings or other means of promoting public interest in and sales of accessories.

NEXT WEEK—How to stage an Enclosed Car Week in YOUR Town.

as merchandise with profit-making possibilities. Several managers reported considerable success in the operation of reporting systems by which dealers, through their associations, kept each other informed about selling prices of various makes and models of used cars. While this has not put a stop to long trading, by any means, it has discouraged it by giving dealers accurate information about resale values.

Speakers Talk Merchandising

The outside speakers were W. Frank McClure, director of promotion of the Fort Dearborn National Bank of Chicago and chairman of the national commission of the Advertising Clubs of the

World; G. Raymond Schaeffer, advertising manager of Marshall Field & Co., and Thomas Ingersoll, secretary of the National Association of Real Estate Boards.

McClure, citing the experience of the Fort Dearborn bank, told how institutional advertising will help build a business. "Show a friendly spirit for your community, make your institution a friendly institution," he said. He advocated promotion of a business man's policies in his advertising instead of mere publicity for the products he sells. His auditors found indirect suggestions for the automobile business in McClure's suggestion for historical exhibits at shows, such for instance as the evolution of transportation, and in his account of business built for his bank by the practice of conducting people through the institution on educational tours.

Schaeffer developed even farther the idea of institutional advertising for merchants. Advertising business ideals and policies, he said, will build respect for a company's merchandising authority and service ability and aid directly in the sale of its products. He strongly advocated active participation by merchants in the civic affairs of their communities, declaring that public service of this sort is an active builder of public confidence and patronage.

Ingersoll gave his audience practical suggestions for association work by describing the organization activities of the national real estate body.

McClure, Schaeffer and Ingersoll reported countrywide improvement in business conditions, as shown by reports to their institutions. Schaeffer said both the wholesale and retail movement of merchandise was improving, and Ingersoll said the stagnation in the building industry was slowly being overcome.

Men at the Convention

In addition to indorsing the Merchandising Campaign of the Automotive Equipment Association, the show managers elected Ray W. Sherman, director of the campaign, to honorary membership. They presented Sherman, who had resigned since the last meeting as executive secretary of their association, with a traveling bag.

Cities represented at the convention were: Kansas City, E. E. Peake and E. H. Coleman; Detroit, H. H. Shuart; Cleveland, Fred H. Caley and Herbert Buckman; Syracuse, Howard H. Smith; Buffalo, C. C. Proctor; Brooklyn, Ralph Ebbert; Newark, Claude E. Holgate; Minneapolis, H. P. Wickham, representing Walter R. Wilmot; Des Moines, Dean Schooler; St. Louis, Robert E. Lee; Little Rock, A. W. Parke; Quincy, Ill., A. L. Stewart.

Guests included Harry G. Moock, general manager of the National Automobile Dealers Association, and A. C. Faeh and L. E. Skeel of the Cleveland organization.

The annual meeting will be held in Chicago on Wednesday of Chicago show week, 1922, and there will also be a luncheon in New York on Wednesday of New York show week.

There's Business for Those Who Go After It

Parts Makers at Credit Convention Declare Fundamental Conditions Improving—Advocate Greater Interest of Industry in Problems of Dealer and Service Man—See Need for Lower Manufacturing Costs and Prices

By JAMES C. DALTON

ONE fundamental fact stood out like a mile post when the session of the Fifth Annual Credit Convention of the Motor and Accessory Manufacturers Association came to a close here today. It is not new but simply was forgotten in the orgy of buying and selling which came with the war.

This big, vital, all-important fact is that if the automotive industry expects to progress in the future as it has in the past, first consideration must be given to the needs and just demands of the ultimate consumer—the person who buys a motor vehicle. Service must be the constant aim of everyone within the industry.

All elements within the industry must strive to

strengthen and help the dealer and the service man so he can give better service to his customers. Dealer financing was admitted to be the weakest link in the automotive financial chain, and it was maintained that vehicle manufacturers must evolve some system more helpful than the one now in vogue.

Prices, from raw materials to finished products and maintenance costs, must be brought down to rock bottom levels. There must be greater efficiency of labor all along the line.

Manufacturing costs must be reduced; every possible economy must be practised; the inferior workman must be taken off the payroll that the ultimate consumer may get the most for his money.

ONE of the most striking statements made at the meeting was this: "So far as industry is concerned, 1913 was last year."

The man who made it was J. P. Harris, vice-president of the Union Trust Co. of Cleveland. He added that the crux of the situation is that we must stop comparing business and profits with 1918 and 1919 which were abnormal years and go back to a normal period for comparisons.

There wasn't a note of pessimism in the whole convention. It was agreed that the worst is over, that the tide has turned and that prosperity is coming back. No one expects a boom and no one wants one. No one has any illusions. As H. H. Rice, president of the Cadillac Motor Car Co. expressed it, "We can confidently expect a very decent business from now on."

Business is better now than it was expected to be a month ago, members of the association admitted, and it has been better for the last three months than it was expected to be. None of the parts and accessory makers have exaggerated expectations for the remainder of this year but the accumulation of orders on their books is being gradually whittled down and they are getting some new business. They expect the sale of automobiles to go along for the next three months pretty much as it has for the past four.

The optimism which radiated from the meeting wasn't based merely on hope. It was founded on fact. Fundamental business conditions are better not only in the United States but throughout the world. Improvement will be gradual and there will be ups and downs but there will be no slump. The industry has been through a terrific storm and has come through it sound as a rock, although more or less battered.

It was admitted that the mortality attendant upon the storm, as represented by failures, has been surprisingly small. It is true that the safes of the parts makers are well filled with gold notes and bonds, promissory notes, trade acceptances and all kinds of I O U's, but the holders of these doubtful securities are not in any sense discouraged.

There was apparent a striking evidence of a desire to co-operate with customers to the fullest extent and not to push them to the wall by filing suits against them so long as there is the slightest chance for the concern which has been the victim of circumstances to make good. There was a storm of protest against a suggestion that the time for leniency was past and that drastic measures should be applied to force payment by customers who have not reduced their past due accounts in a year or more.

It was agreed that there are too many companies in the field manufacturing

motor vehicles. Many of them were practically insolvent when the war came on but were saved for the time being by the insatiable demand for their products. Most of these concerns have reverted to their pre-war status and it was admitted many of them could not live on indefinitely.

There was recognition of the fact that drastic measures against some of these companies might save the innocent public from investment in worthless securities put on the market in an attempt to bolster up financial standing. It was recognized equally, however, that the public sometimes resents being protected and the opinion of the majority was that the parts makers should go on "holding the bag so long as there is any possibility of a company getting on its feet." A going concern, although it may be in a state of innocuous desuetude, is much more valuable than a dead one.

In many respects it was a remarkable convention. It was conceded to be the most successful the association ever held. The attendance reached 250, which officers of the association frankly admitted was many more than they had expected. There had been a feeling that some of the parts makers might feel too poor to make a trip to Detroit, but nearly all of them, big and little, were represented.

There was no disposition to drag into the light the many unhappy experiences of the past year. These men were de-

terminated to get down to brass tacks, and they did. They wanted meat to chew on and they got it out of the speeches made to them. They stuck it out in a stuffy, smoky room until the sessions were over and then they stood around in groups talking it over.

These men had been through a grueling experience in a business way but out of the welter of their troubles they had glimpsed the big fact that to be successful in the future they must become better merchants and merchandisers. They reached out and grabbed that fact and hung on to it with their teeth. They were determined to get some ideas and to apply them to their own lines.

M. A. Moynihan, secretary and treasurer of the Gemmer Mfg. Co., Detroit, summed up the attitude of the parts makers in his brief address.

"Crops are good, labor is efficient, inventories are down, and credit is plentiful," he said. "Let's keep the balance sheet good. Reduce overhead by cutting expenses. Don't use cash capital for expansion. The automotive industry has had few failures in a most trying year. We have marveled at the stamina of some of the weak sisters. But we must expect some further distress among the weaker companies.

"We are in a position to get going. The old order never will return. We are getting greater labor efficiency and we must get greater efficiency from every element of our business. Our units must have good design, economy and sound selling. We must keep down our costs. As makers of component parts we have a big duty to the industry. We must wipe out stock jobbing, contract breaking, undercapitalization and over-borrowing. Business recovery will not be sudden and we have entered an era of keen competition."

"Keen competition" were two words emphasized by almost every speaker. They were agreed that the real merchants are the ones who will succeed in this highly competitive period. This applies not only to the raw material producer, the parts maker and the car manufacturer but to the man who sells the finished product and the man who services it. They agreed that the man who gives the ultimate consumer the most for his money and who takes the best care of his product after it is sold is the one who will get the most business.

In a symposium on "Selling Strategy to Bring the Automotive Industry Back to Normal," service was the big point emphasized. Service and still more service was the central theme of the speakers.

F. S. Armstrong, sales manager of the Vesta Battery Co., Chicago, was one of the most impressive exhorters for service. He began by declaring that times could not be "considered normal when hectic buyers were clamoring to

buy ash cans on wheels, backed by 'Gyp the Blood' for \$1,385 f.o.b. Detroit. Automobile manufacturers must realize," he said, "that the buying public is using uncanny discrimination in getting real values. Car selling is not the only strategy. The chief thing to be improved and the one that will help most of all, is improved service. It must be service that means something, not merely mechanical service, but the morality of

Better Service for the Ultimate Consumer

THAT service must be the constant aim of everyone within the industry—that first consideration must be given to the needs and just demands of the ultimate consumer—was the big fundamental fact recognized at the Fifth Annual Credit Convention of the Motor and Accessory Manufacturers Association, at Detroit, this week.

The convention developed these thoughts:

- 1—Fundamental business conditions are better—failures surprisingly small.
- 2—There's business for those who go after it.
- 3—All elements within the industry must strive to strengthen and help dealers and service men to give better service to his customers.
- 4—A more helpful system of dealer financing must be devised.
- 5—Prices, from raw materials to finished products and maintenance costs, must be brought down to rock bottom levels. There must be greater efficiency of labor. Manufacturing costs must come down.
- 6—Economy must be practised all along the line.
- 7—The tide has turned—prosperity is coming—but nobody expects a boom.

You will want to read every word of this remarkable story of the needs of business as presented at this important convention.

service. This kind of service will improve business. Many a car owner skins his knuckles tinkering at some job for which he would gladly pay a service man what it was worth but not five or ten times what it is worth. The 'Gyp the Blood' must go. I proudly profess a religion of service. He profits most who serves best. The automotive industry must get together to raise the standards of service. We have only one customer and that is the ultimate consumer."

As eloquent as any of Armstrong's words was his statement that August was the biggest month the Vesta Battery Co. ever had.

William H. Huff, advertising manager of the Distel Wheel Co., Detroit, declared there should be co-operative advertising by the parts makers through the M. A. M. A. to extend the sale of cars. This was his first point. His second was that men must be taught how to sell. He declared many automobile salesmen were ignorant of the mechanics of their car and of the parts used in it.

"We must teach men how to sell," he said. He told of the countless potential purchasers who never are asked to buy. He added that the M. A. M. A. could well afford to hire a big man to plan selling campaigns.

Another gospel in addition to that of service was preached. It was that of driving home to the intelligence of everyone the essentiality of the motor vehicle as an agent of transportation.

B. F. Rutherford, vice-president of the B. F. Goodrich Rubber Co., declared every man in the industry should make this a creed like the Lord's Prayer or the National Anthem. He also stressed the fundamental need of service as a sales stimulant. In estimating what was normal, Rutherford said a good definition was, "Normal is 1913 plus the progress made since then."

Resentment of any imputation that the motor car is not an essential ran through the whole thread of the convention. It was emphasized by Harry G. Moock, general manager of the National Automobile Dealers Association, in his address on "Business Conditions in the Automotive Industry and the Prospects for the Future" from the standpoint of the dealer. It might be stated parenthetically that Moock made one of the hits of the convention. It was evident the parts makers were eager to hear of the dealers' problems and sympathized with them.

"The average business life of the automobile retailer is 3½ years. The average of all retailers is 7½ years. Something must be done besides making cars and shipping them out with bill of lading attached. The dealer must be shown how to do business. The flux in the industry is a great economic loss.

A tremendous educational program is needed to bring automobile merchants up to the grade of other merchants. It has been demonstrated that membership in an association extends a dealer's longevity. The man who has the courage of his conviction that he is selling transportation can dig prospects out of all kinds of odd corners. There is no buyers' strike. Everybody wants cars. It is mostly a question of finance."

Moock asserted that the used car problem is one for the entire industry to solve because 90 per cent of the sales made involved trade-ins.

Many of the speakers brought out the point that it is the retail sale which is vital to the industry. Charles Burr, treasurer of S. K. F. Industries, New York, declared that if the merchandising of automobiles had been on a scientific basis much of the industry's troubles could have been avoided.

Utility, price, comfort, safety and low upkeep costs in the order of their importance were given by J. M. McComb, vice-president of the Crucible Steel Co., as the prime essentials for a motor car.

Another encouraging note was sounded by J. H. Collins, manager of the research department of the Chilton Co., Philadelphia. He predicted that replacement business alone in the near future would more than take care of the normal production of well organized companies.

Bulletins Replace Newspaper Ads in Selling Accessories

Although Bi-Weekly Direct-by-Mail Effort Trebles Advertising Expense, Svensgaard, Detroit Dealer, Finds It Pays Handsomely

WHETHER newspaper or direct-mail advertising returns the greatest business in proportion to the expenditure often depends upon peculiar conditions surrounding such activities. In newspaper advertising the pulling power of the mediums used, the effectiveness of the "copy," the duration of the advertising and the frequency of appearance exert strong influences. In direct-mail efforts the purchasing power of the mailing lists, the quality of the "copy" and the frequency of issuance are factors.

At this particular time, when many accessory dealers are considering the advisability of using one or the other form of advertising to stimulate trade, the experience of Harry Svensgaard, Detroit accessory dealer, should be interesting.

It used to cost Harry Svensgaard about \$1,000 a month for newspaper advertising. He used it liberally and his ads as a rule ran three full columns. Now he uses bi-weekly bulletins, mailing them to a large list of car owners. The change has increased his advertising expense to approximately \$3,000 a month, but the increased trade attracted has handsomely rewarded him for the change, Svensgaard says.

IN his newspaper advertising this dealer used approximately 130 inches of display, in which he advertised about 20 items. In his bulletins, he gets four full pages of display, measuring 765 square inches, and featuring ninety to one hundred items. The bulletins are sent to 50,000 small car owners living within a radius of twenty-five miles of Detroit twice every month and occasionally he sends a few thousand more to residents of Pontiac, Mt. Clemens and other nearby cities and towns.

"Advertising," says Svensgaard, "is a modern business necessity. The public depends on the advertiser to tell it of new goods that it needs, to keep it posted on prices and to introduce the latest conveniences for motor car travel.

With the increased display space the bulletin affords this dealer can talk to a concentrated buying audience in a way that, with current newspaper advertising rates, could only be done at an excessive cost. In it he can afford to use many cuts and advertise many things that would be too expensive to display in newspaper space.

"Take this thrust bearing as an example," Svensgaard said. "It is a very useful article. When it is advertised it sells. When it is not advertised it doesn't sell. Why? Simply because the majority of motorists do not know that there is such a thing. When a dealer has articles of this kind to sell he must tell people about

them before they will come in and ask for them—he must advertise.

"With the larger space I can tell the people about my merchandise. And not only that, but the bulletins go into the homes of actual owners of motor cars and it is preserved. It is not necessary to make a note of the fact that I am advertising shock absorbers at so much this week. It isn't necessary to clip the ad from the newspaper. The reader doesn't glance at my advertisement and then go on reading a lot of other advertisements or news articles and forget my announcement. He has my ad and my ad alone in this bulletin. It is folded so as to be carried in the pocket conveniently, or he can lay it aside until the next bulletin reaches him."

How the Combinations-of-Two Work Out

From the theory that many people wait until they see two or more articles which they need or desire advertised before going into a store to make a purchase, Harry points out the immense advantage of the bulletin over newspaper advertising.

A suburbanite, for example, may be in need of a new tire pump, but he won't make the trip into town just for that. But he also needs a new oil can and some cement. He doesn't have to have any of the articles immediately, however, and so he goes along, intending to get them at the first opportunity. One day he sees a tire

pump advertised. Then, a while later, he sees the tire pump, the oil can, and the cement all featured in attractive cuts and he immediately decides to go into town and get these articles.

Making the Ads Pull Harder

From this, advertising men have reasoned that the pulling power of a display advertisement is determined by the number of possible combinations of two articles that are displayed.

If this theory is true, and those who have tried it claim that it works, then the addition or omission of a single cut will have a tremendous effect on the relative pulling power of the advertisement. Suppose, for example, that one runs an ad in which thirty items are featured. The number of possible combinations of two of these articles would then be 870. Now suppose we leave out just one of these items and run only twenty-nine. The number of possible combinations of two is at once reduced to 812, a loss of fifty-two possible combinations of two occasioned by the omission of a single item.

With his immense space, Harry is enabled to run from ninety to a hundred or more items in each issue of his bulletin, giving him as many as 10,000 possible combinations of two.

The Proof of the Pudding

After all, though, the proof of the pudding is in the eating. Does the

bi-weekly bulletin get the business? It does!

In a recent issue of the bulletin, Svensgaard ran a chart of his sales for the past four years. This chart showed that during the first three months of 1921 his business was considerably poorer than during the same period in 1920. From a very low point at the beginning of March, the curve shoots almost straight up, however, and continues upward till it reaches the highest point ever attained at any time, about May 1, where it has remained almost on a dead level ever since. The bi-weekly bulletin was first introduced March 15. The increase shown for June 1, 1921, is approximately fifty per cent over the highest point reached in 1920.

That he will continue this system of direct-mail advertising goes without saying. He now does no newspaper advertising, depending entirely upon the bulletins. And surely they are sufficient!

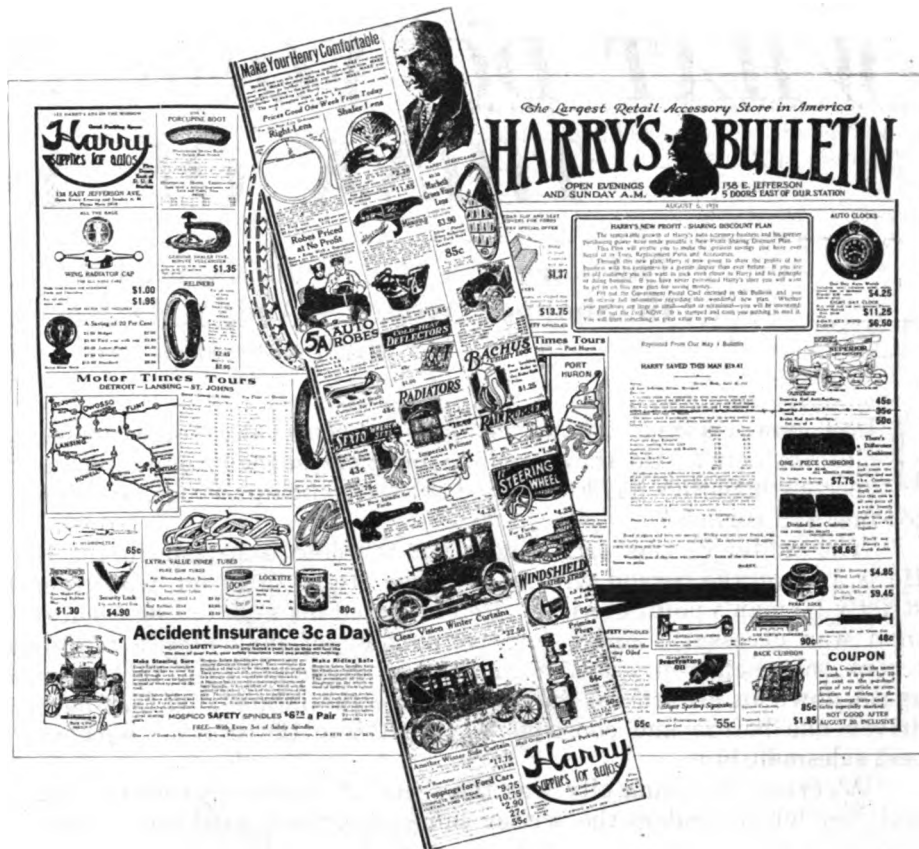
To Inaugurate Such a Campaign

To inaugurate a similar campaign of direct advertising, a dealer can go to concerns that make a business of compiling mailing lists of such prospects as he wishes to reach. The next thing will be to arrange for the printing of the bulletins. Cuts are expensive, but they should be used liberally. Many of these can, of course, be secured from jobbers or manufacturers of the items. It will also be advisable to arrange with the post-office to send out the bulletins without postage.

Svensgaard installed an addressograph and is doing his own addressing. The bulletins are folded so as to fit into a number 10 envelope (4 in.

by 9½ in.), and are sent out without postage. "1c. Paid, Detroit, Mich., Permit No. 424," is printed in the stamp space of the envelope.

How Bulletins Replaced Newspaper Ads



It costs Harry Svensgaard \$3,000 a month to send this bulletin bi-weekly to 50,000 car owners in and near Detroit, but he says it has paid him handsomely to substitute this direct-mail effort for newspaper advertising like the specimen shown above, which cost about \$1,000 a month

Alvin Talks About Long Time Credits

SOME pertinent paragraphs on the foolishness of long time credits in the sale of motor trucks are contained in a letter to the dealer organization of the United States Motor Truck Co. sent out by F. J. Alvin, general manager.

Alvin declares that by the use of diplomacy dealers in practically all cases can convince prospects that long time payments are bad business for them as well as for the dealer. He says:

"The customer that demands from you terms of sale that are not good business must be gone after with sledge hammer blows in a diplomatic way and educated as to how unjust, unfair and dishonest he is in asking you to be both to your company and himself, if he expects to receive the right service co-operation in return.

"Motor trucks cost real money to the dealer and the manufacturer. Labor is cash, the raw materials that go into the truck are cash, the running expenses are

cash, and what is true of motor trucks is true of the business your customer is likewise engaged in.

"Your customer cannot afford to sell his goods to you at a discount, giving away his margin of profit, or else he would starve to death. No customer should ask you to give him your goods, on any other basis than he would sell to you. To do otherwise is not honest or consistent.

"Motor truck salesmen must have the backbone to sit down and discuss this intelligently with your customers. You can show them in a very practical way that when they ask you to give away all your profit that you cannot survive and if you do so, you would be a very unsafe man to do business with.

"We have to educate our customers along the right lines of doing business. Point out to them that motor truck dealers and companies who have been doing business along the loose methods outlined have gone to the wall, become

financially disabled, have been unable to treat their customers right, and that in the end people who have bought motor trucks on such terms have found to their sorrow that the companies or dealers they had business with have made them pay dearly in the end.

"Business can only be done the right way and live. Your customers know this themselves, and if we would sit down and educate them in a diplomatic way, we would find that in a great majority of cases we will be able to sell motor trucks on the terms of payment they should be sold, and by this means be able to always give customers the service we claim we will. Remember service costs money. If you intend to keep faith with your customer, he must buy his goods on a basis that will allow you to do so, otherwise you cannot.

"Insist on them doing business with you along the same lines they have to do business themselves with other people, their customers."

Maybe You Think You
"Knock 'Em Dead", but—

WHAT DO YOUR PROSPECTS THINK OF YOU?

The Story of a Man Who Observed Sales Methods While
He Shopped Around—And, WHY He Signed the Order
for the Successful Salesman

JUST how vigorous do the members of your sales force prosecute their business of turning prospects into owners? Do they combine business sagacity and diplomacy with their unrelenting pursuit of prospects whom they have succeeded in "warming up"? Or, are they losing sales by going at their prospects too fast and furious?

The writer of this article does not pretend to appear in the rôle of an expert critic of sales methods. He is an average person with an average frame of mind, who recently went about purchasing a car with a strictly layman's point of view. He prolonged his negotiations before making a decision considerably longer than was necessary, solely for the purpose of obtaining a comprehensive study of sales methods by different salesmen representing motor car dealers. That the experiences would be all the more profitable as set down in an article, the writer gave the impression that he knew nothing about cars, had never even driven one before and consequently went into the market with an "open mind," ready to be sold by the best salesmanship.

A certain Montana city was the scene of these experiences with motor car salesmen. Just which city and just which dealers the writer came in contact with are immaterial.

AFTER meeting with less than a score of salesmen handling almost as many different cars, he came to the following conclusions:

1—There are more sales being lost by salesmen trying to rush prospects than is generally appreciated by motor car dealers. The salesman who employs vigorous sales methods, tempered with an attitude that gives the prospect the impression that the salesman entertains more than a desire to sell, and do it quick.

2—The salesman who takes his chances on closing a sale by matching his product in a fair way with the product of his competitor, counseling reasonable deliberation as against haste in deciding, refusing to knock a competitor, and showing a personal interest in his dealings with the prospect is the salesman of the winning type.

To show how the methods of attack of different types of salesmen work out, the writer has outlined, briefly, some of his experiences with salesmen before he purchased a car:

"After visiting one house, being shown its lines and having them demonstrated, the salesman who received me as his 'huckleberry' later

proved to be a very striking type of what I consider a 'losing salesman.' My opinion is based on the viewpoint of the layman, and possibly the sales manager may entertain a much different opinion. Nevertheless, I believe that the sales managers would profit by trying to gain the viewpoint of the average layman and analyzing that viewpoint.

“**T**HIS type of salesman had no brakes in his salesmanship make-up. He went at me tooth and nail, and it is not playing with the truth to say that I was a nervous wreck. At first I was impressed with the car as it stood up under demonstration, and had chalked it down in my mind as worthy of my serious consideration when the time to decide as to what I would buy arrived. But the overwhelming persistency of the salesman made me drop his car from my consideration 'like a hot potato.' For four days I was the target for his assaults. I would receive three and four telephone calls a day at my office and one or two at night after I went home. He came personally to my office on three different

occasions and departed only after I insisted—each time—that I had no inclination to discuss the matter during office hours.

"On the fourth day, when I found him waiting in front of my home when I returned from my office, my patience was exhausted. I told him firmly and flatly in as vigorous language as my Christianity would permit—and some that it would not permit—that I wouldn't buy a car from his house if they made me a present of one. And I meant every word of it. It needs only to be said that the salesman promptly junked my name as a prospect to understand the two-fold manner in which I relegated his suggestions to the discard. It was like paying off the last dollar of an old debt to get rid of that fellow.

"Later, I had dealings with three other salesmen representing as many different dealers of about the same type as described above. My only consolation in these dealings was that they were not all at me at the same time. Quite naturally, their efforts were futile. Every time I would intimate that I desired to give the matter of final choice some delib-

eration, they immediately swung into action to rush me into 'signing here.' There may be many prospects who succumb to this brand of salesmanship, but I believe that the average person out to buy a car is constituted differently.

"THERE is just one more incident grouped on the unpleasant side of my experiences as a prospective buyer that I will set down here to show how many automobile salesmen fail. One house handling a popular line of cars lowered itself materially in my estimation when the salesman with whom I was dealing tried to close me by offering to 'throw in' different accessories that did not come with the car. His latest 'inducement' prompted him to come to my office to show me an article that pretended to be a 'war-on-car-thieves' which he said he would present me as a gift if I took the car. This particular article was offered, in addition to three other articles he previously said he would present me, if I bought a car from him. To some people, especially bargain-hunting shoppers, it may be an inducement to 'get something for nothing,' but, for one, I looked upon such offers as cheapening the main article.

"Turning to the other side of my experiences as a motor car prospect, I will say that I met a number of salesmen who showed such an excellent brand of salesmanship in their dealings with me that it is hard to tell now just how I happened to buy where I did. These salesmen did not wear me out—they did not attempt to throw a pen in my hands and sign a contract before I knew what I was doing. They did not lose any opportunity to give their car a just and full presentation in my eyes, but they did not try to force me.

"The answer to the unfavorable influence of the 'forcing' and 'rushing' policy can be summed up by asking:

'Did you ever stand before the gates of a street car in the center of a crowd of people waiting to get on and have some over-anxious person keep prodding you and pushing you? Didn't his actions make your blood boil? Didn't you feel like forgetting for a moment that you were a gentleman and hauling off and depositing your fist in his features?' The salesman who tries to rush a person into buying an automobile is held in as about as high a favor in the

particular occasion that I had not, he did not attempt to engage me in prolonged conversation, but asked that his line not be forgotten in entering upon the final decision.

"When I first met the salesman who later sold me, I told him I was considering buying a car from another house.

"While we think our car is the best for the money you can buy, I am glad to say that if you should consider buying at that house you won't go wrong," he replied. "It is a substantial house handling a reliable line of cars."

"THIS good word for the other fellow made a distinct hit with me. It dispelled in part whatever preconceptions I may have entertained that all motor car dealers are 'cut-throats.' While the salesman who sold me is probably not aware of the fact, I desire to record that his compliment for a competitor was a factor of no small importance entering into the ultimate sale.

"I desire to repeat that I am no expert critic of automobile sales methods, but in the foregoing I have merely presented my experience as a prospect being

turned into an owner, with the idea of possibly suggesting to motor car dealers how they can most effectively direct their sales forces to produce the maximum results.

"The big impression left with me by the salesman who was successful is the fact that he was courteous and considerate at all times. He made me feel that he was really personally interested in my satisfaction, that he wished me to eventually buy the car that would meet my needs best. But at the same time he left with me a strong suggestion that the satisfaction I sought and he wished me to have, would be found in the particular car he sold.

"There can be aggressive salesmanship without 'knock down and drag out' antics on the part of salesmen."



Maybe you think you "knock 'em dead"

eyes of a prospect, according to my opinion.

"THE house where I finally placed my order was about the third house I originally called on. I went back to it because I liked its car, but I dare say the chief reason was because its brand of salesmanship appealed to me. While it did not rush me, it did not give me a chance to forget. I received two personal letters from the salesman, in which he stated he would be pleased to advise me further and to have another personal interview if I 'found it convenient.' He also telephoned me once during the three weeks I was car-shopping, inquiring as to whether I had made up my mind. When I informed him on that

The Farmer Said:

"We're Not Buying"

"That's a Challenge to SELL," Said This Tractor and Farm Implement Dealer, and He Did—Read How!

DETERMINATION of the Maxwell Implement Co. of Valparaiso, Ind., to sell in 1921 in spite of unfavorable conditions, backed by an increased advertising appropriation, a house organ, efficient service and a scheme of co-operative ownership, has enabled it to maintain a volume of sales that compares favorably with any similar period in the past. In March, \$24,000 worth of power farming and other farm operating equipment was sold, and this is more than had been sold in any previous month in the company's history.

At the outset, it was realized that it was going to cost more to sell in 1921 because the farmer was determined not to buy. At a time when retrenchment seemed to be in order, this company increased its advertising appropriation by \$500. The sales executives had confidence in their ability to overcome the resistance and they backed their judgment with money.

The most valuable form of advertising used by this company is the Maxwell Monthly Salesman. Originally an annual catalog was published. The first issues of the Salesman were designed as supplements to this catalog, but the greater usefulness of a monthly house organ was so soon apparent, that the annual catalog was discontinued. The advantages of the Salesman are that it permits of the publication of timely news items and service information, and also of the advertising of merchandise at the most opportune time.

In each issue there are three columns devoted to news from each of the three stores operated by this company. The following quotations are typical:

"John Shupe and Sam Cullon are doing their fall plowing with new Moline tractors."

"A full granary is not always a good thing. Clyde Platt put 3000 bushels of wheat and 2800 bushels of oats in his 28 x 60 ft. granary when he threshed. The load proved too great for the building and it gave way. Platt says the building will be repaired as soon as possible."

"William Ellis says his new Titan tractor has more power than any other make of tractor in the neighborhood. He is giving it a thorough tryout on silo filling."

The advertisements feature equipment which the farmer is likely to need at

the time the Salesman is published. Service articles under such headings as "The Proper Adjustment of the Carburetor" and "How to Clean the Air Washer" are also published. About 3000 of these little magazines are distributed every month.

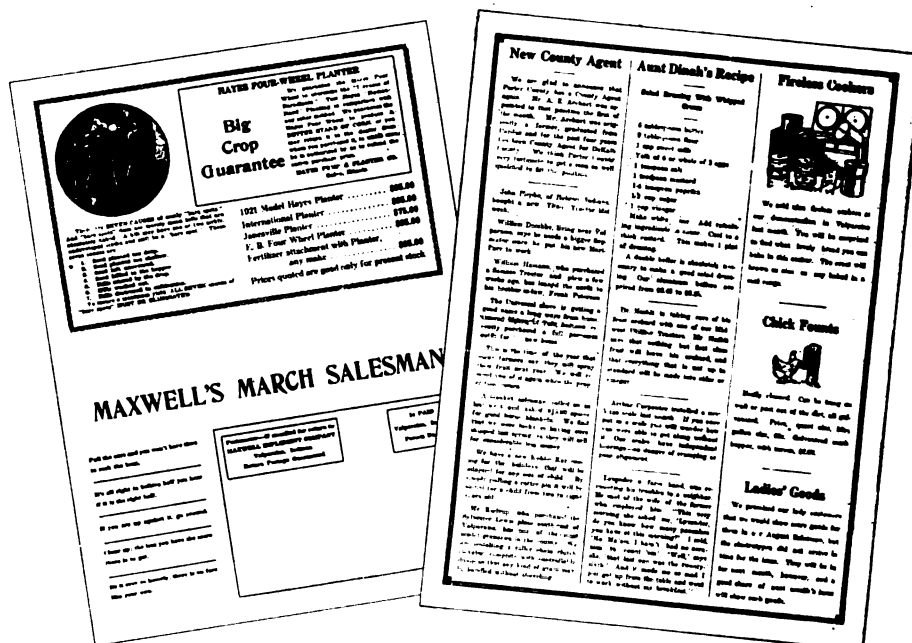
The service end of the business is particularly well handled because the customer comes in contact with an executive of the company. Of course mechanics are employed, but usually an officer of the company answers the service call and determines the work that is to be done. If it requires the time of a mechanic, one is either brought to the job or the job taken to him. This procedure avoids misunderstandings regarding service and consequently helps to keep every customer satisfied.

Making service a personal matter has proved to be a profitable policy. Often actual sales are made on these visits.

In fact, the cost of publicity and service work comes back definitely in the form of sales. As a direct result of one issue of the Salesman, sales have been made that have been sufficiently profitable to defray the entire expense of publication.

Many of the employees as well as 60 farmers strategically located are stockholders in the company. These farmer stockholders were carefully selected and are the leading men in their respective communities. They have been of immeasurable assistance in building the business. The investment they made was not material, but their good-will and help have been invaluable. This scheme of co-operative ownership means that practically all of the employees and sixty farmer customers are financially interested in the success of the business, and they are consequently boosting it with all their strength.

"Monthly Salesman" Helped Tractor Dealer Sell



When the Indiana farmers told the Maxwell Implement Co., Valparaiso, "We're Not Buying," this firm decided to sell stronger than ever before. A monthly bulletin, two pages of which are shown above, was issued in place of the annual catalog. It was made a real farm paper. Service, advertising, salesmanship were brushed up and intensified, and the farmers were interested, in some instances financially, in the company. The result was a sales curve that has stoutly refused to dip very appreciably during the stringent business conditions of 1921.

What's a Salesman Made of, Anyway?

In Which Reilly Shows That Salesmanship Consists of More Than Getting Orders

By NEAL ADAIR



"HOW'S that for putting the yardstick on 'em?" inquired Henry Bennett, the Redman dealer in Callawassa, pointing proudly to a contrivance of cardboard and red tape, made to look like half a dozen thermometers, on the wall of his private office.

His visitor, head of the C. J. Reilly, Inc., whose generous scattering of Sennetts about the territory was at once the envy and admiration of Motor Row, studied the board. "Measuring salesmen—measuring men," he said, half to himself. "It's a good thing, Henry, if you don't overdo it."

"What do you mean, overdo?" Bennett retorted. "Henwood sells ten thousand dollars' worth of cars and accessories this month and the temperature in his thermometer goes up ten points, and Eastman sells six thousand dollars' worth and his goes up six points. I know what my men are doing every time I look up from my desk, and they know what they are doing, and they know I know—that's all there is to it."

"Sure, that's all there is to it," Reilly agreed, "except—"

"Except what? One day you tell me I haven't any system in my business and the next day you say I have too much!" Bennett was getting himself worked up to be the orator of the day at an indignation meeting when the telephone interrupted him.

"That's queer," he said, after he had hung up the receiver. "Chap I never heard of before called up and asked for Eastman, and when the girl told him Eastman was out, got me on the wire and said he wanted Eastman to drop in and talk with him about a car. And this is queer, too. When I told him Eastman was out and we'd send another man down, he said he would wait for Eastman. Said he met Eastman when he delivered a Redman next door, and there was a salesman who knew what he was talking about when he talked automobiles."

Bennett chuckled. "Looks as though Eastman's thermometer might take a jump."

"Just so," said Reilly. "And, Henry, it's a fine thing that call came in, what?"

"I'll say so," Bennett agreed. "Probably means another sale to boost a dull week and—"

"And a whole lot more than another sale, or two or three of them," Reilly interrupted. "It serves to remind us that neither you nor I nor any dealer in this business can sit down and measure salesmen on a mere basis of dollars and cents. We could, if we could run our businesses just as we want to, but we've got to remember, first, that the people we sell to, or try to sell to, have something to say, and the people who work for us also figure, and figure in a big way, in our success or failure."

"But how are you going to measure them?" Bennett asked. "Here we are with winter ahead of us. We've got to have salesmen and we've got to have salesmen who can sell. The man who sells is a salesman, isn't he? And the man who doesn't sell is not a salesman."

"Yes—and no," was Reilly's reply. "Yes, because we can't go on if we don't sell. No, because we can't go on if we don't do anything but sell."

"This is getting deep," Bennett observed.

Reilly ignored the sarcasm.

"Henry," he went on, "there's nothing wrong with your thermometers. There's nothing wrong with charting salesmen's records where you and your salesmen can see them. I think it helps to keep men on their toes. But a salesman who is worth to you only the orders he turns in from day to day isn't worth much—unless you are running a bargain sale and expect to clear out of town the day after to-morrow."

"You've been at the old stand here quite a few years and you expect to be here quite a few years from now. How can you do it? By building an organization, particularly a sales organization, that can sell your good name as well as your merchandise and by building a following of customers that will come back for second, third and fourth pur-

chases and bring their friends along with them. And only a staff of sales-men, not just sales-persons, can do those things for you."

"Go on, I'll be good," Bennett suggested as Reilly paused.

"I don't know as I've ever thought of it in terms of percentages before," Reilly continued, "but here's about the way I feel about it: If I were to set about rating our salesmen, right now I should go at it something like this—Allow 40 per cent for sales—the actual week by week, month by month production of orders; 40 per cent for influence upon our clientele—for the work the salesman does in making the people he has sold friends and boosters for our car and our company; 20 per cent for influence upon our organization—for the usefulness of the salesman's relations with his fellow salesmen and the rest of our employees."

"I don't think I could keep on our staff a salesman who had the knack of getting signatures on the dotted line, but who afterward neglected or abused his customers. He would unsell more cars than he could sell, no matter how high his record might run for a while. And I don't think I could keep a salesman who was always stirring up strife among our men or whose example led some of them into bad habits, or whose words and actions prompted disrespect for our policies or distrust of our intentions. Our salesmen must sell, of course, this fall and this winter, and always, but they must also become harmonious units in our organizations. The fellow who can blow the top off one of your sales thermometers, Henry, isn't worth much if that's all he can do for you."

"But the thermometers," queried Bennett, as Reilly reached for his hat, and prepared to depart, "would you chuck 'em overboard?"

"Not by a long shot," Reilly answered. "Use them—chart your salesmen's temperatures, sure thing."

Then he called from the doorway: "But don't forget their pulse."



Dollar Ideas

Earn a Dollar

MMOTOR WORLD will pay \$1 each for ideas for this department. The ideas should have to do with sales and business management. The idea should be in two parts:

- 1—The problem.
- 2—The solution.

But if you'll get the idea on paper in any fashion whatsoever, we shall be glad to shape it up for you. Do two things:

- 1—Help some other man.
- 2—Make a dollar for yourself.

This Car Speaks for Itself

TOLEDOANS became astonished the other day when a Willys-Knight, advertised as a particularly silent car, drove up to the curb downtown and began talking about itself.

It was one of the new stunts that L. G. Peed, branch manager for Willys-Overland, Inc., city sales, is using to bring attention to his drive for business. The car had a phonographic arrangement located under the hood. It was claimed that the car would "speak for itself."

The car was equipped with a glass hood and polished motor. After the driver left the car standing at the curb it began to do its own talking. "I'm the Willys-Knight," the car shouted. "I am equipped with the wonderful

Knight motor of sleeve valve design. Mine is the only motor —," etc.

The talking was accomplished with a newly patented device, the Magnavox, which was brought out after the war in connection with the wireless telephone. The Magnavox is mounted in the ventilator in the cowl dash. The talking is done from an old model coupe which is parked directly in front of the speaking car and the only connection between the cars is through the front and rear bumpers. Peed finds that this does not excite curiosity because cars are parked so densely on the crowded streets in Toledo that it is a rule rather than the exception for the bumpers to touch. At night another car is usually inter-

posed between the coupe and the talking car, and the electrical connection is made then by a small wire that lies in the gutter close to the curb.

For night exhibition, the inside of the hood is illuminated and the polished aluminum head and other polished parts are attractive. The car can be heard for about half a block and talks quite distinctly.

Free Road Service Helps Battery Sales

L. A. ODOM, local wholesale and retail battery dealer, finds two plans good drawing cards for business. The first, and to date the most successful, is his free road service. At his garage on Spring Street in the city of Spartanburg, he maintains two cars, ready to go at a moment's notice to the assistance of anyone anywhere in the county who is "stuck" on the road because of battery trouble. No matter what the hour of night, these service cars answer the trouble calls, rendering aid free of charge.

The other plan is a motorcycle transportation service for the delivery of single battery orders within a radius of 30 miles of Spartanburg.

Free road service and motorcycle transportation for batteries are two things of which L. A. Odom is justly proud. He is maintaining both to a high degree of efficiency and finds they are the best stimulants of new business he has ever tried. The man "stuck" on the road who gets free service will always remember the friends who helped him.

Sign Directs Attention to the Display Window

THE next time you arrange a window display you might try the idea of an Atlanta merchant in order to make more people look at it. By the process of psychology this merchant accomplished some excellent results with a very simple little plan.

He arranged a good window display and then put an ordinary motor sign board out on the edge of the sidewalk in

When This Car Drove Up and Started to Talk—



Folks in Toledo soon learned that they were being treated to just another of the striking publicity stunts of L. G. Peed, branch manager there for Willys-Overland. Read in the article above how Peed used this talking car

front of the store which read: "STOP! LOOK AT OUR WINDOW DISPLAY!"

Results were somewhat amazing. By actual test over a two-hour period it was learned that many more people stopped to look at the windows when the sign was on the walk than did when it was removed.

Institutional Advertising Helps Sell Used Cars

IT is a good thing for an automobile dealer to every now and then do some institutional advertising. And by institutional advertising is meant the advertising of the intangible things which go to make him a success—his squareness, his eagerness to serve people, the confidence folks repose in him, and all that sort of thing. For instance, here's an advertisement recently used by the Northern Indiana Motor Car Co. of Fort Wayne on the topic of confidence:

"CONFIDENCE is the reason we have sold \$6,300 worth of dependable used cars within the past few days. Confidence of the public in us is what has made us successful automobile merchants. We are selling the best automobile your money will buy anywhere and the confidence we have gained by selling and properly servicing this automobile has given us our choice of some of the best used cars in this part of the country."

Isn't there a hint in this for other automotive concerns?

This Dealer Takes Advantage of Circus Visit

RUSSELL MOTOR CAR CO., White Plains, N. Y., recently capitalized an exceptional display opportunity afforded by the visit of a circus to its town. When the circus parade was held one of the cars accompanied it, carrying a sign which gave the price of the car and the name and address of the dealer. On entering the town after the parade the car was parked near the entrance to the main tent and during intermission the dealer secured permission to speak to the audience about the car. There were also signs in the main tent telling of accomplishments of the car.

Shipping Tags Prove Tire Business Helps

THROUGHOUT the year and especially during vacation season, the Halcomb Auto Supply Co., Hartford, receives by express a great many tires and tubes for repairs. As a means of increasing this class of business and appealing particularly to customers who express their tires to this firm for service, the Halcomb Auto Supply Co. has printed tags addressed to itself and stamped "Express charges collect." These tags have been sent out in great numbers and a large number of tires that have come in with them attached has proved the worth of them as being business builders.

Late and Early Registrants Best Winter Prospects

IN three years' use of motor lists as sales aids for circulars or letters to boost fall and winter garage or repair service and accessory sales, Herbert Brownlee, of Saffold Garage, Cleveland,

get at least late fall, if not all-winter, service from their new cars. Transfers recorded after midsummer also reveal likely fall and winter users. When segregated lists of enclosed cars are available, they have been found well worth the extra charge as a source of winter business.

An Ad That Found Used Car Prospects

PAGE 52

ARKANSAS CITY DAILY TRAVELER, MONDAY, AUGUST 15, 1921.

BUY AN AUTOMOBILE AT NIGHT

During This Week We will Have a Night Sale of Renewed Automobiles



This Maxwell Touring Car worth \$375, will be sold for \$100 this week by Hill-Howard Motor Company.

BUY NOW

If you see the used car in our stock you desire, buy it tonight.

IF YOU ARE LUCKY AND SECURE ONE OF THE 500 CARS FOR \$100 YOU CAN APPLY IT ON THE PURCHASE PRICE OF THE CAR YOU BOUGHT FOR THE ACTUAL VALUE. FOR INSTANCE: IF YOU BUY A \$200 CAR THIS WEEK AND SECURE ONE OF THE THREE PREMIUM CARS YOU CAN TURN IT IN FOR FROM \$300 TO \$375 ON THE CAR YOU PURCHASED, WHERE IT HAS COST YOU ONLY \$100, THUS SAVING \$200 TO \$275 ON THE CAR YOU BUY. DON'T WAIT. THE ABOVE DOES NOT APPLY ON CARS PURCHASED PREVIOUS TO THIS SALE.

—TONIGHT—

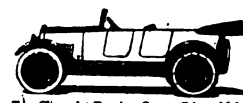
We want fifty to one hundred prospective buyers here this night. We will pay some one of these who register 200% on their investment in an automobile, to secure this attendance. This is no "come-on" game, but is a good clean proposition such as all our customers will tell you we put out. HERE IT IS: Someone gets a good equipped Maxwell, the most popular light car in town, for \$100, the wire wheels on this car cost more than we will sell the whole car for.

1919 MODEL MAXWELL—\$100, worth \$375. Good running shape, repainted, good tires and everything. In case you are the lucky person and want a 6 cylinder car or a higher priced machine, we will accept it back for \$375, its actual market value, on the purchase price of the other car. This means someone can realize nearly 300% on his or her investment. All you have to do to take part in this contest is to agree to take the machine for \$100 and register your name and address in our big book.

Price Range from \$200 on '17 Maxwells to \$2500 on Cole Aero 8

Regular Business makes it rather difficult for you to take your time in purchasing a good used car, so we're going to meet you Mr. Customer after supper.

Come up in your shirt sleeves, we'll be in ours.



This Chevrolet Touring Car will be sold for \$100 each this week by Hill-Howard Motor Company. These cars are worth \$200 each.

The natural prices of used cars are now low, within the reach of anyone who works regularly. Bring your site and decide on a car. We have a wonderful selection of cars, painted, tired with good shoes and very decisions of entertainment for you and your family for months to come.

The Proposition

Everyone who attends this sale and registers, each night will be given a number. The numbers will be put in a hat and one drawn. The one to whom this number belongs will be given the car for —\$100.00 Maxwell 1918 Model, Tuesday night Chevrolet 1919 Model Wednesday night Chevrolet 1919 Model Thursday night

These cars are all renewed. The only requisite to take part in this will be to agree to give \$100 for the cars if you are the lucky one, and those who have the money. We want no contestants with less than the \$100 to complete because it would be unfair to the others.

Drawing at 8:30 each evening, must be at least fifteen people competing or deal is called off.

AMONG THE CARS WE'LL HAVE ON DISPLAY WILL BE:

Maxwells, all models from '17 to '20
Buick Touring
Chalmers '16 Model
Dodge
Reo Touring
Studebaker 6 Touring
Studebaker 4 Touring
Oldsmobile 6 Touring, '20 Model
Chalmers '16 Model
Studebaker 6, '19 Model
Cole Aero 8
Moon Chummy

—Wednesday Night—

1919 CHEVROLET FOR \$100

Worth \$400, good tires, paint, top and mechanical condition, same rules as on Maxwell apply. Will take it back for \$300 on any car in house, thus proving its value. You only have to register Tuesday night.

—Thursday Night—

CHEVROLET 490 FOR \$100

1919 Model worth \$300, all fixed up. Will take it back at that price. Same rules as on previous car.

—Friday Night—

FRIDAY NIGHT WE WILL SELL A CAR FOR \$100, WORTH TWO OR THREE TIMES THAT AMOUNT IF WE HAVE ANY LEFT.

OF COURSE

You can't all win but we guarantee that every one gets a square deal and if you're lucky you will win. We can't make any such prices to those who aren't lucky but we'll give you a car worth more than we'll charge you for it. Come up, see our cars and buy one of us. We'll make you happy if you'll just let us.

We have 5 passenger, 7 passenger, 2 passenger and Chummy Roadsters for your inspection during this sale.

HILL-HOWARD MOTOR CO.

"There's Something You'll Like About Us"

This ad of the Hill-Howard Motor Co., Arkansas City, Kan., developed a prospect list of 400 in three nights for used cars. The night sale was based on the supposition that business makes it difficult for people to go used-car-shopping in the daytime. The Hill-Howard Motor Co. was so well pleased with the project they wish to recommend it to other dealers, and they are interested in the results that others may obtain from it.

has found it most profitable to select from the low and the high license numbers.

The low numbers (say 20 per cent of the total registration) belong to owners who bought their tags in January or February, in most all states, and may be considered steady winter drivers. The high numbers (about 15 per cent of the total registration) indicate the late buyers, who obviously feel they must

Tire Covers Carry Selling Slogans

SOME motor car dealers who are not adverse to lettering the demonstration cars with advertisements have used the tire cover on the back of their cars advantageously. For instance, Russell B. Taber, Inc., Hartford, Conn., uses a tire cover which carries the slogan "Standardize on Reos."

Editorial Observation

Service Around the Clock

HARDLY a day passes but an automotive man, somewhere in the country, announces the opening of all-night and Sunday service for automobile owners. The announcements, numerous as they are, indicate a rapid extension of facilities to assure the operation of motor cars whenever and wherever people want to drive them, yet there are still many natural centers of repair and adjustment work where such service is not available.

This fact suggests the advisability of investigation of continuous service possibilities by dealers and garagemen in territories without this convenience for motorists. Has your town or your neighborhood an all-night service station, or has it efficient and sufficient service of this class? If it hasn't, could you increase your profits by undertaking an extension of your facilities along this line?

The automobile has become so preponderatingly a utility unit of transportation that in many communities inability of an owner to get prompt service for emergency repairs or adjustments any time of day or night is intolerable. And Sunday driving is so nearly unanimous among motorists that in every reasonably central locality there is need of service on the first day of the week.

There is no intention to suggest that all dealers and garagemen need to offer their customers continuous service. There is a field for such service in one or more stations, according to the motor population of the community, in a good many places. A dealer or garageman who has all or much of the necessary equipment would do well to canvass the situation in his territory. He might add considerably to his revenues without much additional expense, and also help his general sales or service business, or both, by providing this extra facility for motor car operation.

Can It Be Done?

AN automotive business man who sells a car which has not reduced its price this year, a truck which has made a reduction approximately in line with cuts of other leading lines and who also deals largely in accessories, in addition to supplying parts in connection with service work, has shown Motor World figures setting forth a 33 per cent increase in sales for 1921 to date over the corresponding period of 1920.

A jobber who handles a full line of automotive equipment, except oils and tires, has submitted records showing 1921 sales running 10 per cent ahead of last year's, not merely in commodity volume, but in money volume, despite price reductions on the majority of lines he distributes.

Neither of these merchants has done anything spectacular. They have just gone ahead with vigorous advertising and sales work, both conducted on a basis of

confidence that business is to be had if business men go after it. The car and truck man operates in a section which touches a coal and iron district, which everyone knows has suffered depression, and the jobber has a territory in which at least half the dealers serve a farm and small town territory, where conditions generally have not been so good as in some of the cities.

Can't sell this year?

These two stories and hundreds of others like them that could be cited make the question ridiculous.

What About Traffic?

THE rapidly increasing automobile population of the country, augmented by a growing use of motor trucks and motorcycles, is bringing the traffic problem to the front in many cities as one which is of urgent concern to dealers. The time has come when the automobile men cannot longer sit back and say traffic regulation is the duty of the city authorities—and let it go at that.

Bad traffic conditions are a factor of sales resistance. Many an ultra-conservative man hesitates to become a car owner because of the congestion, unpleasantness and danger, in his opinion, of driving on main city thoroughfares. And many a family which might have two cars—one for the women to drive—gets along with one because traffic conditions are such that the head of the family will not consent to his wife and daughters taking a hand at the wheel.

Police authorities in most of our cities are working constantly on the traffic problem, many of them wisely, others not as far-sightedly as might be the case if they had the active assistance of the men in the automotive business, who know cars and driving more intimately than the men in authority at headquarters. In every city where the police officials ask help in framing and enforcing traffic regulations, or will accept it if it is offered, the automotive men should be eager to co-operate through emergency or permanent committees.

And after new regulations have been adopted the dealers can be of great assistance to the authorities, at the same time doing themselves a service in speeding the day of better conditions and lessened sales resistance by helping to educate car owners on what they must do. In Newark, N. J., recently, the dealers' association took an active hand in distributing to car owners an "eyegraph" of the parking regulations of 1921. The police department published a map of the city showing all streets, and with the best through automobile routes indicated by heavy black lines, while streets where parking is prohibited are shown in red. On the reverse side are three smaller maps, showing, respectively, the streets on which parking is restricted to one, two and three hours. Through their secretary, members of the dealers' association received copies of the eyegraph, which they were urged to obtain from the city authorities in sufficient numbers to place on the bulletin boards in their service stations and to mail to owners of their cars and trucks.

THE LAW

By GEORGE F. KAISER

Perplexed?

Does some point of law perplex you?

Why don't you ask MOTOR WORLD's legal editor to discuss the question?

Oil Separator a Structural Addition New York Court Holds

The New York Supreme Court, in a recent case, decided that an oil separator was a structural addition within the meaning of a lease which provided that the tenant should make such repairs and alterations as should be required by any of the departments or bureaus of the City of New York, except that it should not be required to make structural additions. The landlord was, therefore, held liable for cost of installation of the oil separator.

The tenant instituted the action to recover the sum of \$800 with interest, the expense incurred by the plaintiff in the installation of an oil separator upon the premises, required to be erected by the orders of the fire department of the city of New York. The lease covering the property provided that the tenant "shall at its own expense during said term make such repairs and alterations in said premises as shall from time to time be required by any of the departments or bureaus of the city, county and State of New York . . . except that the tenant shall not be required to make structural additions or repairs."

The lease further provided that, should any alteration or improvement be required by any of the city departments of structural character, the landlord would make the same at his own cost and expense.

The building was erected by the defendant in 1917-1918 to be used for garage purposes, at which time there existed a city ordinance requiring such buildings to be equipped with an oil separator, to prevent volatile inflammable oils from flowing into the sewer. Defendant filed his plans and specifications for the structure herein, but his application for approval thereof was denied; one of the reasons being that no oil separator was provided. It appears that the Bureau of Fire Prevention was at that time in doubt as to whether the ordinance in question should be enforced; and until the matter was afterwards settled the practice of the department was to require an agreement from the party erecting the building to the effect that the separator would be installed, if required. This defendant accordingly met the objection to his plan by providing:

"Seventh. Installation of oil separator will be held in abeyance until required by fire department. Plans for same will be filed before installation."

After plaintiff had occupied the premises for a considerable time, the fire department decided to enforce the ordinance. Upon defendant's refusal to install the separator, plaintiff erected the same, and sought to recover the cost thereof in the court below, but without success.

The Appellate Court in its opinion said: The complaint alleges two causes of action: the first to the effect that the separator is a structural alteration within the terms of the lease, and the second that the defendant had obligated himself to install the separator by his agreement with the city prior to the execution of the lease with the plaintiff. The evidence establishes that the separator which the plaintiff was required to install consisted of a brick structure, some six or seven feet square; made of walls eight inches thick, which extend from the cellar floor through the ceiling and floor of the street level, including a man-hole and cover on the street floor. The pipes leading from the drain into the oil separator are imbedded in concrete and cement. The brick structure is part of the building and permanently attached to the realty. This seems to indicate that the separator is structural in character. Furthermore, the plans for a garage filed with the building department were passed upon as incomplete without the agreement on the part of the defendant to erect the separator, if required. In other words, the plans did not show a lawful garage until they provided as an essential part thereof the structural modifications necessary to provide for the oil separator.

The facts brought out in connection with the first cause of action also virtually cover the second cause of action. Having agreed with the city to erect the separator, if required, it is difficult to understand how the defendant can avoid the obligation at the expense of the tenant. Moreover, at the time he made such agreement there was no lessee of the premises, and there was no one who could be bound except defendant himself. Defendant is clearly liable upon the facts presented, and also under the authorities governing agreements similar to the case at bar. (*Herald Square Realty Co. v. Saks & Co.*, 215 N. Y. 427, 109 N. E. 545.) *New York Motor Truck Sales Corp. v. Coise*, 189 N. Y., S. 94.

Want State Headlight Laws

Editor Motor World: Will you please send booklet giving State laws for dif-

ferent States in reference to headlight for automobiles, etc.; also road map late edition, especially for trip to Florida, etc.—W. A. D., North Manchester, Ind.

Answer: We have no such booklet. In fact, we do not know of any up-to-the-minute compilation of the headlight laws of the various States of the United States. The last compilation we have is several years old and would therefore be useless to you.

If enough subscribers request a compilation of this kind we shall be glad to bring our old compilation, published several years ago, up to date. *How about it, subscribers?*

The Excise Tax Law

Rev. Act of 1918—Title IX—Section 900

That there shall be levied, assessed, collected and paid upon the following articles sold or leased by the manufacturer, producer or importer, a tax equivalent to the following percentage of the price for which so sold or leased.

(1) Automobiles, trucks and automobile wagons (including tires, inner tubes, parts and accessories therefor sold on or in connection therewith or with the sale thereof), 3 per centum.

(2) Other automobiles and motorcycles (including tires, inner tubes, parts and accessories therefor, sold on or in connection therewith or with the sale thereof) except tractors, 5 per centum.

If any manufacturer, producer or importer of any of the articles enumerated in this section customarily sells such articles both at wholesale and at retail, the tax in the case of any article sold by him at retail shall be computed on the price for which like articles are sold by him at wholesale.

(903) Monthly returns must be made in duplicate and taxes paid to collector in which principal place of business is located—penalty 5 per cent plus 1 per cent per month for failure to file return or pay tax, etc.

Regulation No. 47. Tax imposed on all articles sold after Feb. 25, 1919—imposed on sale by manufacturer—measured by sale price and not of list price when that differs from actual sales price.

Must Pay Excise Tax

Editor Motor World: We wish that you would advise us as to whether there is an excise tax to be paid by the manufacturer of tire accessories and tire flaps in particular when that manufacturer sells to jobbers.—M. R. L., New York.

Answer: Yes, you must pay an excise tax. See article above.

A Department of
BETTER MECHANICS

Conducted by J. HOWARD PILE

No. 209

When asking for information, please state whether you maintain a permanent file of Motor World, as many inquiries are answered by reference to previous issues

Time Estimates on Studebaker Repair Operations

*Factory Has Worked Out a Complete System Which
Makes It Possible to Estimate on Time and Parts Both*

Part III (Continued)—List of Parts Needed for Each Operation

List of Parts for Single Operations

(Continued from Sept. 14 issue)

Operation No.	Quantity	Part No.	SERIES 19 FOUR Name of Parts	Operation No.	Quantity	Part No.	SERIES 19-20 LIGHT & SPECIAL SIX Name of Parts	Operation No.	Quantity	Part No.	SERIES 19-20 BIG SIX Name of Parts
Group R				Group R				Group R			
1	4	18669	Starter brushes.	1	4	18669	Starter brushes.	1	4	18669	Starter brushes.
2	1	19800	Starter armature complete.	2	1	19800	Starter armature complete.	2	1	19800	Starter armature complete.
	2	18669	Starter brushes.		2	18669	Starter brushes.		2	18669	Starter brushes.
3	4	18669	Starter brushes.	3	4	18669	Starter brushes.	3	4	18669	Starter brushes.
4	1	30468	Starter motor with sprocket.	4	1	30468	Starter motor with sprocket.	4	1	30468	Starter motor with sprocket.
5	1	16995	Starter chain complete.	5	1	16995	Starter chain complete.	5	1	16995	Starter chain complete.
6	3	13153	Starter clutch pawl.	6	3	13153	Starter clutch pawl.	6	3	13153	Starter clutch pawl.
	1	13150	Starter clutch housing.		1	13150	Starter clutch housing.		1	13150	Starter clutch housing.
	1	31819	Radiator outlet hose.		1	31819	Radiator outlet hose.		1	31819	Radiator outlet hose.
	2	13754	Starter clutch cover gasket.		2	13754	Starter clutch cover gasket.		2	13754	Starter clutch cover gasket.
	3	12178	Starter clutch pawl spring.		3	12178	Starter clutch pawl spring.		3	12178	Starter clutch pawl spring.
7	1	9437	Starter clutch sprocket.	7	1	9437	Starter clutch sprocket.	7	1	9437	Starter clutch sprocket.
	3	11510	Starter clutch sprocket bolt.		3	11510	Starter clutch sprocket bolt.		3	11510	Starter clutch sprocket bolt.
	3	24x50	Starter clutch sprocket bolt nut.		3	24x50	Starter clutch sprocket bolt nut.		3	24x50	Starter clutch sprocket bolt nut.
	2	13754	Starter clutch cover gasket.		2	13754	Starter clutch cover gasket.		2	13754	Starter clutch cover gasket.
	1	31819	Radiator outlet hose.		1	31819	Radiator outlet hose.		1	31819	Radiator outlet hose.
8	1	13161	Starter fastening screw.	8	1	13161	Starter fastening screw.	8	1	13161	Starter fastening screw.
	1	31819	Radiator outlet hose.		1	31819	Radiator outlet hose.		1	31819	Radiator outlet hose.
9	1	30373	Starter switch complete.	9	1	30373	Starter switch complete.	9	1	30373	Starter switch complete.
10	1	13750	Starter clutch complete.	10	1	13750	Starter clutch complete.	10	1	13750	Starter clutch complete.
	1	31819	Radiator outlet hose.		1	31819	Radiator outlet hose.		1	31819	Radiator outlet hose.
11			No parts required.	11			No parts required.	11			No parts required.
12	1	32683	Starter front end plate.	12	1	32683	Starter front end plate.	12	1	32683	Starter front end plate.
	1	32678	Starter front end plate gasket.		1	32678	Starter front end plate gasket.		1	32678	Starter front end plate gasket.
Group S				Group S				Group S			
1			No parts required.	1			No parts required.	1			No parts required.
2	2	24537	Steering worm adjusting shim.	2	2	24537	Steering worm adjusting shim.	2	2	24537	Steering worm adjusting shim.
	2	17460	Steering worm gear thrust washer.		2	17460	Steering worm gear thrust washer.		2	17460	Steering worm gear thrust washer.
3	2	24537	Steering worm adjusting shim.	3	2	24537	Steering worm adjusting shim.	3	2	24537	Steering worm adjusting shim.
	2	17460	Steering worm gear thrust washer.		2	17460	Steering worm gear thrust washer.		2	17460	Steering worm gear thrust washer.

List of Parts for Single Operations

Operation No.	Quantity	Part No.	SERIES 19 FOUR Name of Parts	Operation No.	Quantity	Part No.	SERIES 19-20 LIGHT & SPECIAL SIX Name of Parts	Operation No.	Quantity	Part No.	SERIES 19-20 BIG SIX Name of Parts
Group S (Continued)				Group S (Continued)				Group S (Continued)			
3	1	12372	Steering worm.	3	1	12372	Steering worm.	3	1	12372	Steering worm.
2		30850	Steering worm thrust bearing.	2		30850	Steering worm thrust bearing.	2		30850	Steering worm thrust bearing.
1		32221	Steering worm gear.	1		31887	Steering worm gear.	1		31887	Steering worm gear.
1		18508	Steering worm gear case cover.	1		18508	Steering worm gear case cover.	1		18508	Steering worm gear case cover.
1		17452	Steering worm gear case bushing.	1		17452	Steering worm gear case bushing.	1		17452	Steering worm gear case bushing.
4			No parts required.	4			No parts required.	4			No parts required.
5			No parts required.	5			No parts required.	5			No parts required.
6			No parts required.	6			No parts required.	6			No parts required.
7	1	32208	Steering post.	7	1	31876	Steering post.	7	1	31876	Steering post.
8	1	32211	Spider.	8	1	31877	Steering wheel complete.	8	1	31877	Steering wheel complete.
1		32212	Rim.								
4		36x141	Screws.								
9	1	32860	Throat lever shaft with bushing.	9	1	31880	Throat lever shaft with bushing.	9	1	31880	Throat lever shaft with bushing.
10	1	35327	Throttle control rod.	10	1	35327	Throttle control rod.	10	1	35327	Throttle control rod.
11	1	32221	Steering worm gear.	11	1	31887	Steering worm gear.	11	1	31887	Steering worm gear.
12	1	12372	Steering worm gear.	12	1	12372	Steering worm gear.	12	1	12372	Steering worm gear.
Group T				Group T				Group T			
1	1	38803	Top deck.	1	1	38606	Top Deck.	1	1	42974	Top deck.
1		38881	Side quarter, right.	1		38704	Side quarter, right.	1		38478	Side quarter, right.
1		38882	Side quarter, left.	1		38705	Side quarter, left.	1		38479	Side quarter, left.
2	1	33249	Glass in rear curtain.	2	1	33249	Glass in rear curtain.	2	1	33249	Glass in rear curtain.
3	1	34909	Rear curtain.	3	1	33480	Rear curtain.	3	1	33825	Rear curtain.
Group U				Group U				Group U			
1	1	35550	Transmission assembly.	1	1	32672	Transmission assembly.	1	1	31892	Transmission assembly.
8	6x15		Cotter keys.	8	6x15		Cotter keys.	8	6x15		Cotter keys.
			½ gal. trans. oil.				½ gal. trans. oil.				½ gal. trans. oil.
2	1	31889	Transmission case with plugs.	2	1	31889	Transmission case with plugs.	2	1	31889	Transmission case with plugs.
8	6x15		Cotter keys.	8	6x15		Cotter keys.	8	6x15		Cotter keys.
1		32591	Hand control base gasket.	1		32591	Hand control base gasket.	1		32591	Hand control base gasket.
1		31923	Reverse idler bracket gasket.	1		31923	Reverse idler bracket gasket.	1		31923	Reverse idler bracket gasket.
1		35240	Speedometer drive gear housing gasket.	1		35240	Speedometer drive gear housing gasket.	1		35240	Speedometer drive gear housing gasket.
			½ gal. trans. oil.				½ gal. trans. oil.				½ gal. trans. oil.
3	1	31918	H. & I. sliding gear.	3	1	31918	H. & I. sliding gear.	3	1	31918	H. & I. sliding gear.
1		32591	Hand control base gasket.	1		32591	Hand control base gasket.	1		32591	Hand control base gasket.
1		35240	Speedometer drive gear housing gasket.	1		35240	Speedometer drive gear housing gasket.	1		35240	Speedometer drive gear housing gasket.
			½ gal. trans. oil.				½ gal. trans. oil.				½ gal. trans. oil.
4	1	31919	Low and reverse sliding gear.	4	1	31919	Low and reverse sliding gear.	4	1	31919	Low and reverse sliding gear.
1		32591	Hand control base gasket.	1		32591	Hand control base gasket.	1		32591	Hand control base gasket.
1		35240	Speedometer drive gear housing gasket.	1		35240	Speedometer drive gear housing gasket.	1		35240	Speedometer drive gear housing gasket.
			½ gal. trans. oil.				½ gal. trans. oil.				½ gal. trans. oil.
5	1	31897	Countershaft drive gear.	5	1	31897	Countershaft drive gear.	5	1	31897	Countershaft drive gear.
4		31895	Countershaft rivets, short.	4		31895	Countershaft rivets, short.	4		31895	Countershaft rivets, short.
1		32591	Hand control base gasket.	1		32591	Hand control base gasket.	1		32591	Hand control base gasket.
1		35240	Speedometer drive gear housing gasket.	1		35240	Speedometer drive gear housing gasket.	1		35240	Speedometer drive gear housing gasket.
			½ gal. trans. oil.				½ gal. trans. oil.				½ gal. trans. oil.
6	1	31894	Countershaft.	6	1	31894	Countershaft.	6	1	31894	Countershaft.
4		6078	Countershaft rivets, long.	4		6078	Countershaft rivets, long.	4		6078	Countershaft rivets, long.
1		31895	Countershaft rivets, short.	4		31895	Countershaft rivets, short.	4		31895	Countershaft rivets, short.
1		32591	Hand control base gasket.	1		32591	Hand control base gasket.	1		32591	Hand control base gasket.
1		35240	Speedometer drive gear housing gasket.	1		35240	Speedometer drive gear housing gasket.	1		35240	Speedometer drive gear housing gasket.
			½ gal. trans. oil.				½ gal. trans. oil.				½ gal. trans. oil.
7	2	616	Countershaft bushing.	7	2	616	Countershaft bushing.	7	2	616	Countershaft bushing.
1		32591	Hand control base gasket.	1		32591	Hand control base gasket.	1		32591	Hand control base gasket.
1		35240	Speedometer drive gear housing gasket.	1		35240	Speedometer drive gear housing gasket.	1		35240	Speedometer drive gear housing gasket.
			½ gal. trans. oil.				½ gal. trans. oil.				½ gal. trans. oil.
8	1	31910	Transmission shaft.	8	1	31910	Transmission shaft.	8	1	31910	Transmission shaft.
1		32591	Hand control base gasket.	1		32591	Hand control base gasket.	1		32591	Hand control base gasket.
1		35240	Speedometer drive gear housing gasket.	1		35240	Speedometer drive gear housing gasket.	1		35240	Speedometer drive gear housing gasket.
1		6x49	Transmission shaft cotter key.	1		6x49	Transmission shaft cotter key.	1		6x49	Transmission shaft cotter key.
			½ gal. trans. oil.				½ gal. trans. oil.				½ gal. trans. oil.
9	1	30486	Trans. shaft front brg. cone.	9	1	30486	Trans. shaft front brg. cone.	9	1	30486	Trans. shaft front brg. cone.
1		32591	Hand control base gasket.	1		32591	Hand control base gasket.	1		32591	Hand control base gasket.
		35240	Speedometer drive gear housing gasket.	1		35240	Speedometer drive gear housing gasket.	1		35240	Speedometer drive gear housing gasket.
			½ gal. trans. oil.				½ gal. trans. oil.				½ gal. trans. oil.
10	1	9173	Trans. shaft brg. cone, rear.	10	1	9173	Trans. shaft brg. cone, rear.	10	1	9173	Trans. shaft brg. cone, rear.
1		9172	Trans. shaft brg. cup, rear.	1		9172	Trans. shaft brg. cup, rear.	1		9172	Trans. shaft brg. cup, rear.
1		32591	Hand control base gasket.	1		32591	Hand control base gasket.	1		32591	Hand control base gasket.
1		35240	Speedometer drive gear housing gasket.	1		35240	Speedometer drive gear housing gasket.	1		35240	Speedometer drive gear housing gasket.
			½ gal. trans. oil.				½ gal. trans. oil.				½ gal. trans. oil.
11	1	32592	Gear shift rod.	11	1	32592	Gear shift rod.	11	1	32592	Gear shift rod.
		32593	Gear shift rod.			32593	Gear shift rod.			32593	Gear shift rod.
1		32591	Hand control base gasket.	1		32591	Hand control base gasket.	1		32591	Hand control base gasket.
12	1	31903	Transmission pinion.	12	1	31903	Transmission pinion.	12	1	31903	Transmission pinion.
1		6x47	Transmission pinion cotter key.	1		6x47	Transmission pinion cotter key.	1		6x47	Transmission pinion cotter key.
1		31925	Transmission pinion oil washer.	1		31925	Transmission pinion oil washer.	1		31925	Transmission pinion oil washer.
			½ gal. trans. oil.				½ gal. trans. oil.				½ gal. trans. oil.

List of Parts for Single Operations

Operation No.	Quantity	Part No.	SERIES 19 FOUR Name of Parts	Operation No.	Quantity	Part No.	SERIES 19-20 LIGHT & SPECIAL SIX Name of Parts	Operation No.	Quantity	Part No.	SERIES 19-20 BIG SIX Name of Parts
Group U (Continued)				Group U (Continued)				Group U (Continued)			
13	1	9154	Trans. pinion front brg. cup.	13	1	9154	Trans. pinion front brg. cup.	13	1	9154	Trans. pinion front brg. cup.
	1	9155	Trans. pinion front brg. cone.		1	9155	Trans. pinion front brg. cone.		1	9155	Trans. pinion front brg. cone.
	1	9172	Trans. pinion rear brg. cup.		1	9172	Trans. pinion rear brg. cup.		1	9172	Trans. pinion rear brg. cup.
	1	9173	Trans. pinion rear brg. cone.		1	9173	Trans. pinion rear brg. cone.		1	9173	Trans. pinion rear brg. cone.
	1	31925	Trans. pinion oil washer.		1	31925	Trans. pinion oil washer.		1	31925	Trans. pinion oil washer.
	1	32591	Hand control base gasket.		1	32591	Hand control base gasket.		1	32591	Hand control base gasket.
	1	6x47	Cotter key.		1	6x47	Cotter key.		1	6x47	Cotter key.
			$\frac{1}{2}$ gal. trans. oil.				$\frac{1}{2}$ gal. trans. oil.				$\frac{1}{2}$ gal. trans. oil.
14	1	31920	Reverse idler gear.	14	1	31920	Reverse idler gear.	14	1	31920	Reverse idler gear.
	1	31921	Reverse idler gear shaft.		1	31921	Reverse idler gear shaft.		1	31921	Reverse idler gear shaft.
	1	31923	Reverse idler bracket gasket.		1	31923	Reverse idler bracket gasket.		1	31923	Reverse idler bracket gasket.
	1	32591	Hand control base gasket.		1	32591	Hand control base gasket.		1	32591	Hand control base gasket.
			$\frac{1}{2}$ gal. trans. oil.				$\frac{1}{2}$ gal. trans. oil.				$\frac{1}{2}$ gal. trans. oil.
15	1	31899	Countershaft low speed gear.	15	1	31899	Countershaft low speed gear.	15	1	31899	Countershaft low speed gear.
	4	6078	Countershaft rivets, long.		4	6078	Countershaft rivets, long.		4	6078	Countershaft rivets, long.
	4	31895	Countershaft rivets, short.		4	31895	Countershaft rivets, short.		4	31895	Countershaft rivets, short.
	1	35240	Speedometer drive gear housing gasket.		1	35240	Speedometer drive gear housing gasket.		1	35240	Speedometer drive gear housing gasket.
	1	32591	Hand control base gasket.		1	32591	Hand control base gasket.		1	32591	Hand control base gasket.
			$\frac{1}{2}$ gal. trans. oil.				$\frac{1}{2}$ gal. trans. oil.				$\frac{1}{2}$ gal. trans. oil.
16	1	32589	Hand control base.	16	1	32589	Hand control base.	16	1	32589	Hand control base.
	1	32591	Hand control base gasket.		1	32591	Hand control base gasket.		1	32591	Hand control base gasket.
17	1	31898	Countershaft int. gear.	17	1	31898	Countershaft int. gear.	17	1	31898	Countershaft int. gear.
	4	6078	Countershaft rivets, long.		4	6078	Countershaft rivets, long.		4	6078	Countershaft rivets, long.
	4	31895	Countershaft rivets, short.		3	31895	Countershaft rivets, short.		4	31895	Countershaft rivets, short.
	1	35240	Speedometer drive gear housing gasket.		1	35240	Speedometer drive gear housing gasket.		1	35240	Speedometer drive gear housing gasket.
	1	32591	Hand control base gasket.		1	32591	Hand control base gasket.		1	32591	Hand control base gasket.
			$\frac{1}{2}$ gal. trans. oil.				$\frac{1}{2}$ gal. trans. oil.				$\frac{1}{2}$ gal. trans. oil.
18	1	32594	Gear shift fork.	18	1	32594	Gear shift fork.	18	1	32594	Gear shift fork.
	1	32591	Hand control base gasket.		1	32591	Hand control base gasket.		1	32591	Hand control base gasket.
Group V				Group V				Group V			
1	1	31950	Front wheel.	1	1	31951	Front wheel.	1	1	31951	Front wheel.
	1	31967	Front wheel dust washer.		1	31968	Front wheel dust washer.		1	31968	Front wheel dust washer.
2	1	31954	Front wheel hub.	2	1	31955	Front wheel hub.	2	1	31955	Front wheel hub.
	2	31856	Front wheel hub bolts.		8	31856	Front wheel hub bolts.		8	31856	Front wheel hub bolts.
3	1	9167	Front wheel brg. cone, small.	3	1	30486	Front wheel brg. cone, small.	3	1	30486	Front wheel brg. cone, small.
	1	9166	Front wheel brg. cup, small.		1	9175	Front wheel brg. cup, small.		1	9175	Front wheel brg. cup, small.
4	1	31962	Front wheel brg. cone, large.	4	1	31963	Front wheel brg. cone, large.	4	1	31963	Front wheel brg. cone, large.
	1	31964	Front wheel brg. cup, large.		1	31965	Front wheel brg. cup, large.		1	31965	Front wheel brg. cup, large.
5	1	31862	Rear wheel.	5	1	31861	Rear wheel.	5	1	31861	Rear wheel.
6	1	31867	Rear wheel hub.	6	1	31868	Rear wheel hub.	6	1	31868	Rear wheel hub.
	8	31856	Rear wheel hub bolts.		8	31856	Rear wheel hub bolts.		8	31856	Rear wheel hub bolts.
7	1	9157	Rear axle shaft bearing cup.	7	1	30330	Rear axle shaft bearing cup.	7	1	30330	Rear axle shaft bearing cup.
	1	31661	Rear axle shaft bearing cone.		1	31662	Rear axle shaft bearing cone.		1	31662	Rear axle shaft bearing cone.
	1	6x49	Rear axle shaft cotter key.		1	6x49	Rear axle shaft cotter key.		1	6x49	Rear axle shaft cotter key.
	1	31663	Rear axle shaft dust washer.		1	31664	Rear axle shaft dust washer.		1	31664	Rear axle shaft dust washer.
8	1	31848	Tire Rim.	8	1	31847	Tire rim.	8	1	31847	Tire rim.
9	1	31849	Tire rim clamping bolt.	9	1	26367	Tire rim clamping bolt.	9	1	26367	Tire rim clamping bolt.
10	1	26301	Tire rim clamping bolt nut.	10	1	26301	Tire clamping bolt nut.	10	1	26301	Tire clamping bolt nut.
11			No parts required.	11			No parts required.	11			No parts required.
12			1 pound cup grease.	12			1 pound cup grease.	12			1 pound cup grease.
Group W				Group W				Group W			
1	1	37920	Upper frame with glass.	1	1	37920	Upper frame with glass.	1	1	33950	Upper frame with glass (Series 19).
2	1	37921	Lower frame with glass.	2	1	37921	Lower frame with glass (Lt. Six).		1	37209	Upper frame with glass (Series 20).
					1	42387	Lower frame with glass (Sp. Six).		2	33951	Lower frame with glass (Series 19).
3	1	33181	Windshield complete.	3	1	33181	Windshield complete (Lt. Six).		1	37227	Lower frame with glass (Series 20).
					1	38744	Windshield complete (Sp. Six).		3	33507	Windshield complete (Series 19).
									1	38482	Windshield complete (Series 20).
Group X				Group X				Group X			
1			2 pounds cup grease.	1			2 pounds cup grease.	1			2 pounds cup grease.
2			1 gallon transmission oil.	2			1 gallon transmission oil.	2			1 gallon transmission oil.
3			2 pounds cup grease.	3			2 pounds cup grease.	3			2 pounds cup grease.

(Continued in September 28 Issue)

STUDEBAKER FLAT RATE PLAN

Part I—Forms and Workings of the System appeared in the August 24 issue. Part II—Group Operations and Labor Time Appeared August 31. Part III—The List of Parts for Single Operations Started September 14 and the List of Parts for Combined Operations will appear Next Week.

Repairshop Shortcuts

No. 3048—Port Plug for Knight Engine.—Plugs for the ports in a Knight engine are made from old inner sleeves, cut and filed so that they fit very accurately into the slots. This allows the rings to pass the ports without catching.
—Henry M. Holt, Willys-Overland, Inc., New York City.

No. 3049—Mechanic's Tool Chest.—A mechanic's tool chest is made by riveting a handle to the top of a running-board tool box. The ordinary catch and key can be used for locking or a hasp and staple can be riveted on for a padlock.
—R. G. Dasse, Burlington, Vt.

No. 3050—Combination Garage Door.—Where conditions do not permit the use of a small and large door in the garage, a small door can be fitted right in the large one. When the large door is rolled, the small door is hooked and rolls with it.
—M. S. Welch, Brooklyn, N. Y.

No. 3051—Connecting Rod Alignment Jig.—A bar, squared on the ends, is turned or ground in sections, each being a different diameter to accommodate different size bearings. The sizes are marked and a surface gage is used to test for parallelism.
—Frank A. Brown, Selden Motor Truck Co., New York City.

No. 3052—Pulling a Gear.—A gear is pulled from a countershaft more easily if one jaw of the puller is held in a vise. This leaves both hands free for manipulation.
—J. H. Chavez, La Jara Garage, La Jara, Col.

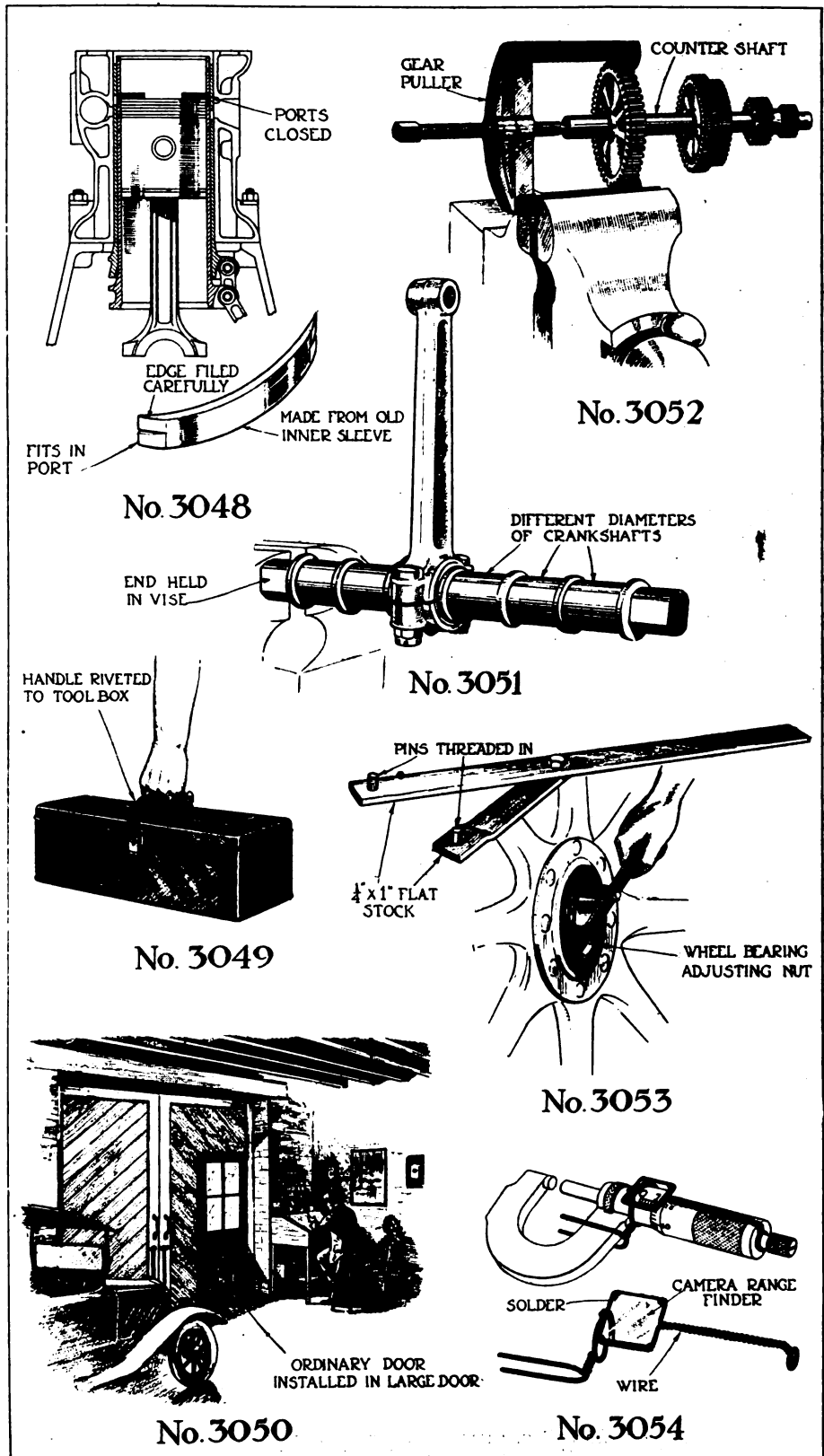
No. 3053—Adjustable Spanner Wrench.—An adjustable spanner wrench which will fit all sizes of adjusting nuts having holes in the sides is made of two flat strips, bolted, as shown, and with pins threaded in the ends.
—Frank A. Brown, Selden Motor Truck Co., New York City.

No. 3054—Micrometer Magnifying Glass.—To make readings more accurate and easier, a small magnifying glass or camera finder is wired over the scale of the micrometer. The proper focus is found and the glass secured in that position.
—Arthur G. Raabe, Long Island City, N. Y.

MAKE A DOLLAR

SEND in a sketch and a brief description of the device you used to solve some particularly difficult problem. Sign your name and furnish us with the name and address of the concern with which you are connected.

Motor World will pay a dollar for every idea accepted for publication.



SYSTEM IN BUSINESS

This Department Is Intended to Assist Motor World Readers in Working Out Their System Problems—It Will Answer Questions Concerning System and Accounting

Monthly Inspection System Pays Profits

It Keeps Both the Owner and the Dealer Informed as to the Condition of the Truck—How a New York Dealer Provides This Service

MONTHLY inspections are a service that the truck dealer should sell when he accepts the order. Maintaining the first glow of enthusiasm that the owner has for a new truck has been found to be worth while. The sales department has been put to considerable expense to create this enthusiasm. The service department is charged with the work of maintaining it. If it is allowed to die, the selling expense represents a partial waste because when the owner is again in the market for a truck, the road to a resale is not going to be smooth.

The monthly inspection serves a three-fold purpose:

- 1—It keeps the owner informed as to the condition of his truck.
- 2—It keeps the dealer informed as to the condition of the truck.
- 3—It opens the way for the sale of service.

Unless the dealer makes a monthly inspection of the truck and submits a report, the owner is forced to depend on his driver. The driver may be conscientious and have a thorough me-

chanical knowledge of the truck. On the other hand, he may be treating the truck unfairly, or he may not have the knowledge prerequisite to diagnosing mechanical troubles. In either of the latter cases, the owner needs expert opinion on the condition of the truck because the truck only makes money for him while it is on the road. Monthly inspections by the dealer help him keep the truck on the road.

The dealer needs this information because he wants the truck to get a square deal. Furthermore, the dealer is interested in keeping the truck on the road because the owner's satisfaction is

measured by the profits he makes on its operation. The inspection enables him to avoid an inconvenient breakdown or expensive repairs, either of which would increase the cost of operating the truck.

If the inspection shows that the truck should come into the shop for repairs, the way is open for service salesmanship. The dealer is in possession of accurate information as to the condition of every part of the truck. When the flow of work in the shop shows a tendency to slow up, the file of inspection reports provides a live service prospect list. The dealer can find out quickly what trucks need service work and he can make an effort to get these trucks into the shop.

Most truck dealers offer this inspection service free to their customers provided they bring their trucks into the service station. Often the owner doesn't find it convenient to take a truck off a job for this purpose, or he is just plain negligent. The result is that the truck is not inspected and consequently all the benefits of this service are lost.

In order to avoid this condition, many dealers are taking the inspection to the truck. They regard this service to be of such vital importance to both the owner and themselves that they maintain traveling inspectors whose business is to inspect every truck every month.

The Manhattan Motors Corp., New York City, has adopted this plan. Every month each owner receives a return postal card. This card advises him that the inspector will call on a certain date and hour. If the truck will not be available at the appointed time, the owner is asked to use the return card to state when and where the inspection can be made. When the inspection is made, a report is filled out in quadruplicate. The original goes to the owner, the duplicate to the dealer, the triplicate to the driver and the quadruplicate to the Selden factory.

The idea of monthly inspections has not been taken up by passenger car dealers to any extent yet. Some dealers have, however, adopted the idea. It would seem that it would offer the same advantages to the car dealer as to the truck dealer.

THE BEST TIME TO INSPECT OUR TRUCK IS

AT _____ MONTH _____ DAY _____ TIME OF DAY _____ A. M. P. M.

FIRM NAME _____ BY _____

YOU KNOW OUR INSPECTION SAVES YOU MONEY

OUR INSPECTOR WILL CALL AT YOUR OFFICE

AT _____ MONTH _____ DAY _____ TIME OF DAY _____ A. M. P. M.

IF YOUR TRUCK WILL NOT BE THERE AT THIS TIME RETURN ATTACHED CARD ADVISING WHEN AND WHERE INSPECTIONS CAN BE MADE.

MANHATTAN MOTORS CORPORATION
230 WEST 19th ST. N. Y. C.

MONTHLY INSPECTION
Selden
SERVICE DEPARTMENT

Chassis No. _____ Mileage _____ Date _____

Owner _____ Inspector _____

INSPECTION CALL _____ TIME _____ Hrs. _____ Min.

Name Marked (X) Adjusted Name Marked (H) Road Shop Attention

MOTOR	TRANSMISSION
Cylinders	Oil Level
Crank Case	Oil—Supports
Scavenger	Scavenger Ad.
Bearings	Gear Shift
Valves	STEERING ARROW
Compressor	Pivot Pin
Push Rods	Rods—Cross—Side
Headlamps	Steering Gear
Oil Level	REAR AXLE
Oil Pump & Pipes	Oil Level
GOVERNOR	Worm Bearings
Sealed	Worm Carrier Cap Screws
RADIATOR	CHASSIS
Connections	Beards—Bumper
Water Pump	Universal
FAN	Propeller Shaft
CARBURETTOR	Radius Rods
Miles per Gal.	Foot Brakes
Front Headlamps	F. Springs
Gas Tank—Fuel Pipe	R. Springs
Check	Spring Bolts
IGNITION	Spring Clips
Magneto—Type	Wheels—Bearings
Breaker Points	F. Frame
Belt	BODY
Pipe—Wiring	Sub
CLUTCH	HOIST
Thrust—Bearing	Cylinder Pump
Clutch Plates	Clutch—Drive
Adjustment	Oil
CRANK SHAFTS	Aligner Box
Condition of Truck	

Dealer _____

Signed by _____

Exempt this Form in Quadruplicate—White copy for Owner—Pink for Dealer—Yellow for Driver—Blue to be mailed to Chief Inspector, Selden Truck Corporation, Rochester, N. Y.

The postcards on the left are used to arrange the appointment for the inspector. The inspection form on the right is filled out in quadruplicate

SCIENTIFIC CONSTRUCTION

GARAGES

SHOWROOMS

REPAIRSHOPS

Conducted by DONALD D. BLANCHARD

Typical Dealer Building on Corner

Car and Accessory Sales, Car Storage and Service Provided for

MOTOR WORLD is glad to receive and answer inquiries for garage plans, but in order that there may be as little delay as possible in submitting the plans desired it is imperative that the following information be given:

Size of plot, with rough sketch showing shape and its relation to adjoining plots; name and number of departments operated; number of cars to be shown in salesroom; number of cars in garage; any other pertinent details.

THE dealer in the small town or city usually requires a building that provides facilities for car and accessory sales, car storage and service. The general arrangement shown in the plan on this page is almost standard for buildings for businesses in this classification. The car showroom and accessory store extend across the front of the building. In back of them are located the offices and stockroom. Then comes the car storage space and in the back the shop.

From the standpoint of sales, the front of the building has the greatest value and as much of it as possible should be



The same general architectural scheme should be carried back on the side street as far as the rear wall of the salesroom

used for this purpose. When the building is located on a corner, the entrance to the garage and service station should be on the side street. In this building, if the driveway were placed in front, both the showroom and accessory store would suffer.

Accessory Store Separate

A partition is placed between the accessory store and car salesroom. These two are separate departments and should be operated individually if possible. In a small establishment it is sometimes too expensive to have them separated, as two salesmen are required. In this case, there would be no partition between the two so that the business could be handled by one person. The

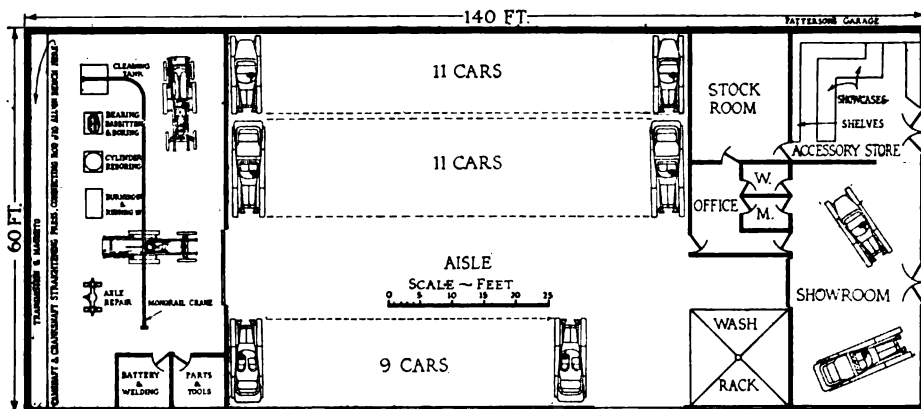
office and stockroom have no windows, but they can be well lighted by skylights.

The arrangement of the cars in the garage is not ideal inasmuch as one row of cars has no aisle frontage. However, in order to make use of the full width of the building, this arrangement is necessary. If the cars are stored in two rows facing a center aisle, the capacity is reduced materially and the aisle is unnecessarily wide. However, by careful placing of the cars in storage many of the difficulties resulting from this arrangement can be avoided.

The shop is placed across the rear of the building. The entrance to it is through the garage. Inasmuch as this building is for a Ford dealer, the shop is completely equipped with special equipment for repairing this make of car. A separate room is provided for the battery and welding departments. A small stock of parts for the use of the shop should be carried in the toolroom as a convenience.

Trade Literature

Small Tools, Catalog No. 46. Greenfield Tap and Die Corporation, Greenfield, Mass. This new 400 page catalog describes the small tools and pipe tools which are the product of this company. The tools described include screw plates, taps, dies, drills, reamers, milling cutters, bits, arbors, countersinks, hobs, tap and drill kits, mandrels, sleeves, socket wrenches, sockets, stocks, tap wrenches, pipe vises and pipe wrenches.



Floor plan for one-story building on corner lot to be used by Ford dealer

Accessibility a Feature of the New Cletrac

THE new Cletrac Model F tractor which went into production September 1, and which was described in the Aug. 24 number of Motor World, has a number of features that will appeal strongly to the service man, and the selling features have been made to stand out very sharply.

To give an idea of some of the accessibility features, the entire radiator core may be removed by taking out two screws and disconnecting the two hose connections. The core can then be pulled vertically out of the pressed steel core case, which, being a flanged member, takes all of the stresses and eliminates any straining of the core. The core case is supported by a bridge to the transmission case. This bridge, consisting of two longitudinal pressed steel members, carries the fuel and oil tanks and the water air strainer. The entire bridge with the tanks and strainer can be removed by taking out four screws and disconnecting the gasoline line. This leaves the engine head free for removal, or permits the operator to reach any of the upper parts of the engine assembly. Incidentally, the mounting of these tanks on the bridge at the upper part of the tractor puts the carburetor and air intake above the dust line and provides this installation at the cleanest part of the entire tractor assembly.

Another advantage of the location of the fuel tank on the bridge is that it provides a straight gravity feed to the carburetor, although this is mounted on top of the intake manifold, giving a down draft arrangement. This allows the heavy end points of the fuel to drop on the upper face of the hot-spot, giving a more complete utilization of the exhaust heat than would be possible by any other arrangement, as well as shortening the travel from the carburetor to the valve opening. This, of course, has the advantage of reducing condensation to a minimum. The temperature of the exhaust hot-spot is held at about 450 deg. Kerosene is used as standard fuel, although gasoline may be employed if desired. The fuel tank is provided with a small auxiliary sub-tank for gasoline which is employed for starting.

Getting back to the subject of accessibility, which will probably be one of the first points to excite the attention of possible purchasers of this machine, the

ease with which the various units can be removed can be illustrated also by further examples. For instance, the gear driven fan, the helical timing gear and the cross-shaft for the magneto and water pump are all part of an assembly mounted on the front end of the engine. The water pump may be pulled out from the side by removing four bolts from the water pump flange. The water pump drive gear comes with it. Or the entire front motor gearcase casting may be removed, carrying with it the timing gears, water pump, magneto and fan, as well as the power drive pulley. This leaves the entire front end of the engine open for inspection.

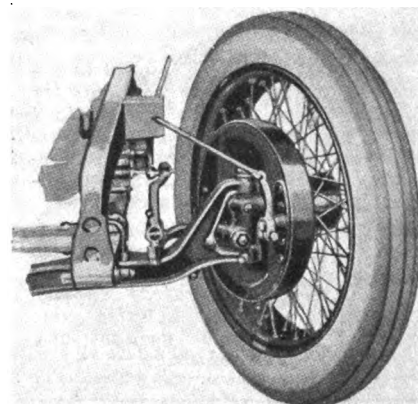
To reach the lower part of the engine, the oil pan which runs the entire length of the engine and transmission case, may be dropped, and then, by taking out one nut from each of the front spring points, the entire tractor can be lifted up around the dead axle which acts as the suspension pivot point. This permits the operator to work on the engine in a vertical position. By taking off the main bearings, he can pull out the crankshaft, connecting rods, pistons, clutch shaft, flywheel, and then by taking off the back or transmission cover, all other inner parts of the engine are removable. A little ingenious touch is the use of the starting crank for the gear shifter lever. The starting crank cannot be removed from its gear shifting position unless the gears are in neutral. Thus, it is impossible to crank the engine with the gears engaged. Furthermore, it would be impossible to leave the starting crank in the field, because the gears cannot be engaged until the starting crank is fitted into position as the gear shift lever.

From the owner's and operator's standpoint, one of the most meritorious features of the new tractor is the single oiling point. By the use of the unit crank and transmission case, one oil point suffices for lubrication of all of the working parts of the tractor. On the earlier product, there is but one grease cup and this is located on the water pump shaft, but will be shortly replaced by a packing gland which will do away with the only point requiring attention from the operator. By careful location of the oil filling point, the oil flows into the transmission case and then to the crankcase, so there is no

possibility of dry bearings in the transmission when starting the tractor after a new supply of oil has been admitted.

New Four-Wheel Braking System

STANDARD brake drums with expanding brake bands, with either cam or toggle action, are used on the front wheels in the new Landry System of four wheel braking. The drums are bolted to the front wheels by using the regular hub bolts. Circular steel plates of the same diameter as the brake drums are stamped to fit around the knuckle, and are forged or welded to the axle

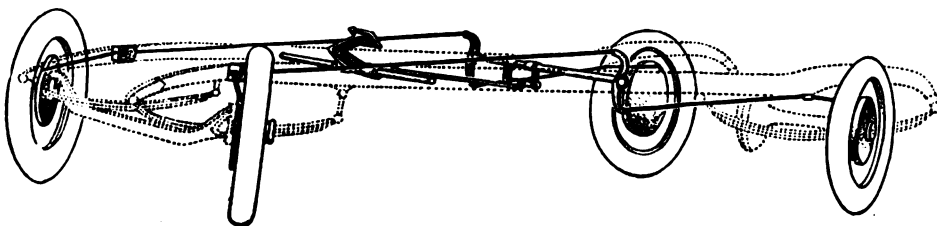


Installation of brake on front wheel

spindle. This feature is intended to keep the dirt and water out of the internal expanding mechanism. The axle spindle is attached in the usual manner.

A vertical, S-shaped lever with a fulcrum at its center and a groove at its outer face is attached either to the brake rocker shaft or the frame. In the latter case, a rod connects the bottom of this lever with the regular brake rocker shaft. The front brake lever is connected with the cable which runs around an S-shaped lever to the rear brake lever, making the front and rear brakes work in tandem on each side of the car. Front brake levers are located vertically on the circular steel plates in front of the steering knuckle pin and the brake cable passes in a line and over the center of the steering pin bolt to the guide on the side of the frame. The cable passes through guides which are attached to the frame at an angle so that the wheels will turn without touching the cable. The turning of the wheels is compensated and equalized through the two S-levers and the whiffletree equalizer. The cables are equalized front and rear by slipping in the groove of the S lever. The tandem sides are equalized by means of the divided brake rockershaft.

This braking system is manufactured by the Landry Mfg. Co., 50 Nye Street, New Bedford, Mass.



Operating linkage used with Landry four-wheel brakes

New Shuler Front Axle Has Brakes

FRONT wheel brakes are incorporated in a new front axle for trucks which is being produced by the Shuler Axle Mfg. Co., Louisville, Ky. Heretofore, front wheel brakes have been spoken of mainly in connection with passenger cars, but there is no doubt that they offer considerable advantage when applied to trucks, especially when the truck is used to haul trailers behind it. Powerful brakes are really essential on trucks because so many of them are operated in the congested sections of the large cities where the chances of collision are great.

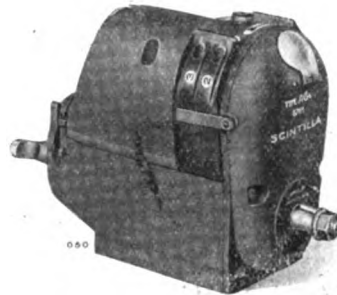
The brake on the Shuler axle is of the internal expanding toggle-operated type. Any adjustment required to compensate for wear of the brake lining is made by changing the length of the toggles. The links are hinged to lugs riveted to the brake band near its end and they also connect to a two-armed spider, the hub of which is adapted to slide up and down on an extension of the knuckle pin. The knuckle pin is keyed to the knuckle with a tapered key and turns with it, the upper and lower members of the axle yoke being suitably bushed. The bushing in the upper member is provided with a head forming a cam or end cam and the brake lever arm, the hub of which is inserted between this bushing and the two-armed spider, is formed with a similar end cam engaging with the former. Any pull on the brake lever causes it to turn around the pivot axle and at the same time to rise on the knuckle pin, carrying with it the two-armed spider and spreading the end of the brake band through the intermediary of the toggle links. When the front wheel is swung around in steering the brake lever with its end cam and the bushing in the steering yoke remain stationary, the brakes

therefore are not affected by the steering action.

The axle to which these front wheel brakes are fitted is of from 2 to 2½-ton capacity.

New Inductor Type Magneto

AN inductor type of magneto in which the permanent magnet revolves and the windings are stationary is being marketed by the Scintilla Magneto Co., Inc., which is affiliated with the Societe Anonyme Scintilla, Soleure, Switzerland. The magnet is of what may be de-



Scintilla inductor type magneto

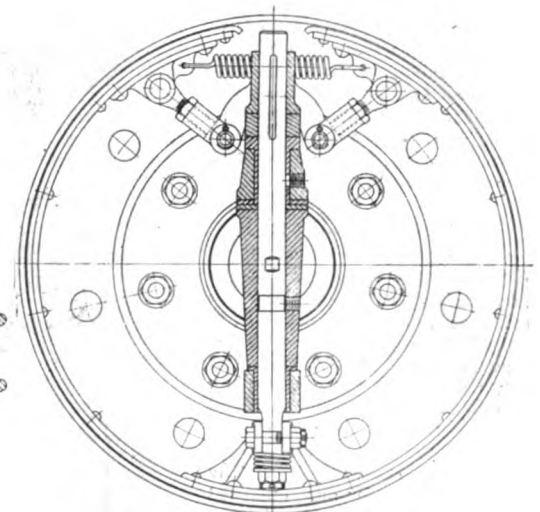
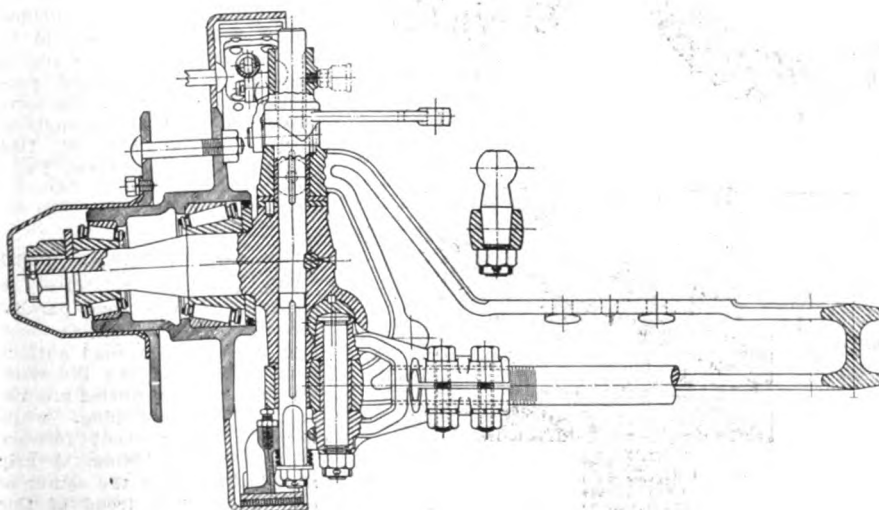
scribed as bell form, and is arranged with its axis horizontal, in the usual place of the armature. The stationary windings are located above the magnet at the pole end and the distributor drum is at the opposite end. The machine is completely enclosed and is entirely water proof, it is claimed. The contact breaker is located at the coil end, is operated by a cam on the magneto shaft and

is easily accessible. It is held in place by a bayonet lock and can be quickly removed. The distributor gears are located at the opposite end from the breaker. Its contact segments are embedded in a drum of insulating material and there are as many carbon brushes as there are cylinders to be sparked. The brushes do not rotate and their pressure on the distributor is, therefore, not affected by centrifugal force. Two screws hold the windings to the pole pieces. The condenser is wound over the wire winding. As there are no movable windings, no collector ring is necessary. Handy means for timing the magneto are provided and the timing lever can be connected in any of eight different positions by unscrewing the center screws on the inside of the contact breaker. Scintilla magnetos are made for engines with from one to eight cylinders.

Trade Literature

The *Timer Times*, a house organ published for jobber salesmen by the J. & B. Mfg. Co. of Pittsfield, Mass., manufacturer of electrical and ignition specialties, makes its bow in a September issue. The new publication is done in newspaper form with attractive illustrations and typography and contains several interesting items for reader consumption.

Making Light of Glare, C. A. Shaler Co., Waupun, Wis. The first few pages of this pamphlet discuss the problem of proper road illumination. The balance of the pamphlet shows how the problem is solved through the use of Shaler Road-lighter, a patent lens.



On the left is a cross-section showing the installation of the brake drum. The construction of the brake and drum are shown at the right

Automotive Equipment

NEW COLLAPSIBLE RIM

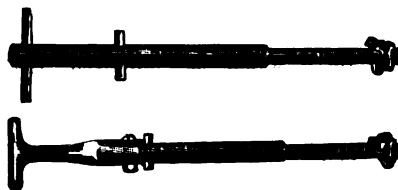
This rim has an automatic unlocking section which operates on a new principle. In the event of tire trouble, the motorist removes the tire and rim and gives them a sharp bounce on the road which automatically releases the rim. When the tire is replaced the rim is locked by a slight pressure of the foot against the unlocking section. The rim is made in all standard sizes.—Collapsible Rim Corporation, Gotham National Bank Building, Broadway at Columbus Circle, New York City.



New Collapsible Rim



New Era Duplex Bumper



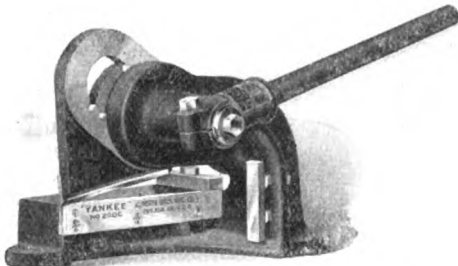
Transmission Band Adjusters

NEW ERA DUPLEX BUMPER

A spring steel bumper, with two cross bars, weighing about 30 pounds. The bumper is said to be finished very carefully. It is first given a heavy coat of zinc followed by copper and then a plate of nickel. The arms are made interchangeable and detachable thus enabling the dealer to keep his stock investment at a low point and to permit the installation of the bumper by only one man. Prices range from \$13 to \$22 depending on the size and finish.—New Era Spring & Specialty Co., Grand Rapids, Mich.

YANKEE CUTTER NO. 2000

A special tool for cutting brake lining belting. It handles all kinds and sizes of brake lining and belting up to six in. wide and $\frac{3}{4}$ in. thick. Power is secured through a rack and pinion movement which is operated by a lever. In case of wear or regrinding, the knives may be adjusted. Adjustable guides are provided on base and frame to insure the work lining up at right angle to knives. These tools are packed in individual wooden cases.—North Bros. Mfg. Co., Philadelphia, Pa.



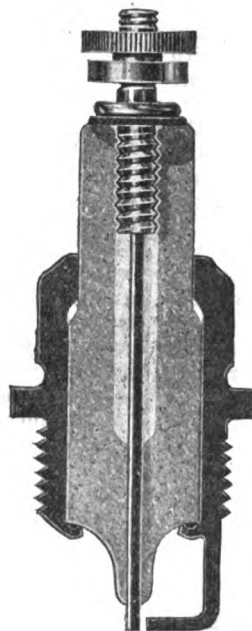
Yankee Cutter No. 2000

ADVERTISING TIRE COVERS

These covers are supplied with any desired advertising lithographed on them. In this way the car is used as a moving road sign.—Perkins-Campbell Co., Cincinnati, Ohio.



Advertising Tire Covers



BZ Spark Plug

STANDLEY TRANSMISSION BAND ADJUSTER

The band adjuster is a special tool which makes it possible to adjust the brake and transmission band of the Ford car without removing the cover of the transmission case. Two styles are manufactured, one for the use on Fords without starters, and one for use on Fords with starters. They are packed in cartons, two to each set.—Standley Skid Chain Co., Boone, Iowa.

BZ SPARK PLUG

In this plug the insulator is inserted through the bottom of the steel shell and the shell is crimped at the bottom. This design allows the formation of a solid steel shoulder inside near the top of the shell to hold the insulator against compression. The electrodes are not contained in a chamber. The Ford size has a hollow core insulator that is said to shed oil. This plug is made in sizes to fit all standard passenger cars, trucks, tractors, motorcycles and marine engines.—Bodin Spark Plug Co., 1106 Court Street, Allentown, Pa.

DIUGUID FENDER MIRROR

Through an error, the price on this device was given as \$15.95 in the August 3rd number of Motor World. These mirrors are made in various shapes, sizes and finishes and the prices range from \$3.50 up to \$14.—The manufacturers are Diuguid Bros., 975 Atlantic Avenue, Brooklyn, N. Y.

AUTO INDICATOR

The signal is attached in place of the regular tail-light and carries the license tag. The cable attached to the stop signal is connected with the service brake. The right and left turn signals are given by means of a finger shift control lever which is clamped to the steering column. There are no electrical connections. The operating cables are enclosed in dust, water and oilproof flexible metal housings. Price \$20.—Auto Indicator Co., Grand Rapids, Mich.



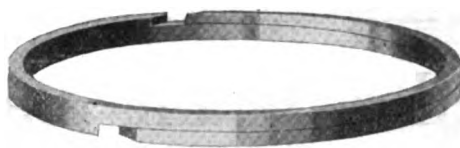
Auto Indicator

AJAX BLACK TREAD CORD

The tread of this tire in addition to the two parallel grooves circling it, has been built up until its road surface is practically flat on the road. The two deep channeled grooves prevent side slipping, while heavy cleats prevent forward or backward skidding. A grip spot is located in the center of each cleat. The tread of this tire is black and the side walls cream-white.—Ajax Rubber Co., Inc., New York City.

SPYROSEAL RINGS

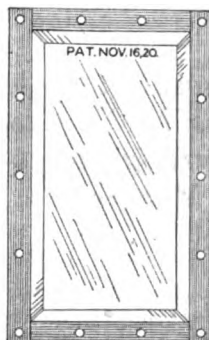
The features of this cast, one-piece piston ring are the long laps and open slots between the laps. The laps extend two-thirds of the way around the ring circumference. — Spyro Seal Mfg. Co., 1926 Gravois Avenue, St. Louis, Mo.



Spyro Seal Rings

BEVOLITE

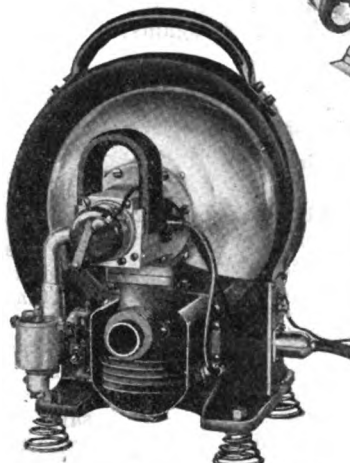
A replacement light for Ford back curtains from 1917 to 1921, inclusive. The nickel frame is $\frac{1}{4}$ in. wide after it is bent over and pressed down on the outer edge of the light, the bevel of which has previously been embossed to imitate beveled glass. It is applied to the curtain with fourteen nickel fasteners. The lights are furnished in sets of three packed in cartons. Price per set of three, \$2.50.—Replace Light Mfg. Co., 2308 Sixth Avenue, Rock Island, Ill.



Bevolite

HOMELITE ELECTRIC POWER PLANT

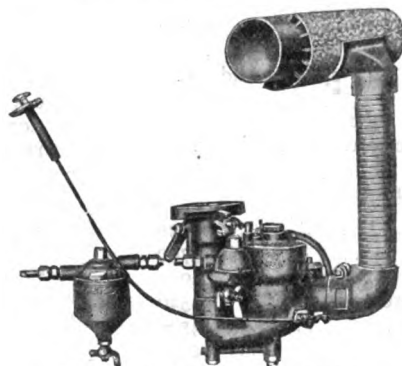
The Homelite is a small power plant, weighing but 100 lb., exclusive of the storage battery. A handle is provided so that it may be transported conveniently. The 12-16 volt size has a 30-ampere current output. The plant is also made for operation at 32-40 volts. The generator is rated at 400 watts. The switchboard is of the semi-automatic type, with starting and stopping button, and automatic cut-out. The engine is a single cylinder, two-stroke cycle, air-cooled type, with a normal speed of 1450 r.p.m. and develops $1\frac{1}{4}$ hp. The bore is $2\frac{1}{4}$ in. and the stroke $2\frac{1}{4}$ in. The ignition is by means of a Simms high tension magneto. Prices, 12-16 volts, \$300; 32-40 volts, \$345.—Simms Magneto Co., East Orange, N. J.



Homelite Electric Power Plant

ENSIGN MODEL "E" CARBURETER

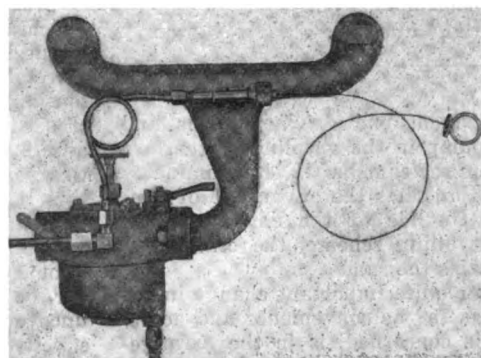
The new model Ensign carbureter has manual starting control and a new type of idling adjustment. The choke is arranged so that instead of cutting off the air supply it is said to give a higher velocity in the vortex chamber. The adjustments are placed on the top of the carbureter where they are easily accessible. Prices: One inch \$25; $1\frac{1}{4}$ in. \$27.50; $1\frac{1}{2}$ in. \$30; $1\frac{3}{4}$ in. \$35.—Ensign Carburetor Co., 217 East Seventeenth Street, Los Angeles, Cal.



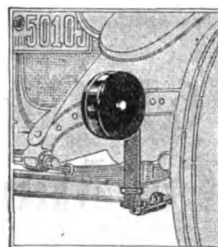
Ensign Model "E" Carbureter

GASOLINE INJECTOR FOR FORDS

A device for priming the manifold of the Ford engine. The injector is screwed into the intake manifold and is connected to the gasoline line through a three-way connection which replaces the usual carbureter connection. The plunger in the injector is operated from the dash by means of a cable. Price, \$2.50.—J. & B. Mfg. Co., Pittsfield, Mass.



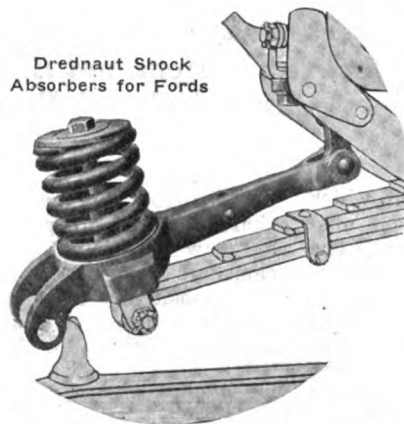
Gasoline Injector for Fords



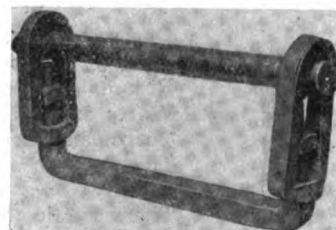
Amco One Way Check

AMCO ONE WAY CHECK

When the body of a car equipped with this device moves downward upon hitting a rough place in the road, the coil spring revolves freely, allowing the automobile springs to act naturally. When the body of the car starts upward on its rebound, the coil spring locks and automatically engages a leather faced circular brake, which lets the car body go back to its normal position easily. A small screw is provided for adjusting the brakes to the weight of the car. It is said that they may be installed on practically all makes of cars. Price \$36. per set of 4.—American Metals Corp., Indianapolis, Ind.

Drednaut Shock Absorbers for Fords**DREDNAUT SHOCK ABSORBERS FOR FORDS**

A coil spring is used to absorb the rebound in this shock absorber. It is installed in place of the regular spring shackle and has a lever which attaches to the frame. High grade material is said to be used in the construction throughout.—Auto Specialties Mfg. Co., St. Joseph, Mich.



Ladd Toe Grip Cleats

LADD TOE GRIP CLEATS

These cleats fasten around the tire and rim, and are locked in place by means of a bar which passes between the spokes. A complete set consists of ten units, five for each rear wheel. They are made for all sizes of tires from $3\frac{1}{4}$ in. up to 10 in. Prices per set range from \$65 up to \$120.—Traction Devices, Inc., 284 Thomas Street, Newark, N. J.



Gilbert Tire Covers

GILBERT TIRE COVERS

These tire covers are made of a patented watershed construction which covers all exposed edges and is said to absolutely protect the tire. The material commonly used for manufacture of these covers is heavy enameled duck or artificial leather, or any special material can be supplied. They are produced in black and standard colors of nine different shades.—Gilbert Mfg. Co., York and Grove Streets, New Haven, Conn.

WARE AUTOMATIC VALVE ADJUSTER AND SILENCER

The silencers are attached by removing $1\frac{1}{4}$ in. from the push rod, preferably at the top. A spring steel washer between the two units of the Ware Valve Adjuster keeps the tappet snug against the valve stem at all times. The eccentric mechanism adapts itself to changes in the length of the push rod due to heat. Price \$2.—Ware Products Co., 3916 North Fifth Street, Philadelphia, Pa.



Ware Automatic Valve Adjuster and Silencer

New Model 61 Cadillac Retains Basic Features But Has Many Mechanical Changes

All Body Models on 132 in. Wheelbase—Change in Tire Size Lowers Body—Detail Changes in Engine, Carbureter, Electrical System and Body Arrangements—Prices Identical with Former Models

REFINEMENTS in design in which art and engineering blend distinguish the new Cadillac. The new model which has just been introduced carries forward the improvements which have been made from time to time in the Cadillac eight and by a number of detail changes, is a car of more pleasing appearance, better performance and, in certain parts, greater durability.

No radical changes are to be found. The same eight-cylinder engine which has been in use since the first car of this type was introduced is still employed with very little change. The same general plan of power transmission is utilized and no basic feature of design has been altered. Nevertheless, important results have been attained by these detail refinements.

All Cadillac cars are now mounted on a 132-in. wheelbase chassis. Formerly, a 125-in. wheelbase was used to take care of certain body types, but now all are on the same standard length. The cars are lower, and this has been accomplished by the use of wheels equipped with 33 by 5-in. tires in place of the 35 by 5 in. formerly employed. Only one engineering change is necessitated by this lowering of the car. This is in decreasing the size of the rear axle housing, which is the low point of the chassis, in order to maintain the same road clearance as in the former models.

In redesigning the rear axle, a very largely increased bearing surface has been provided for the pin on the torque member. The increase in the size of this bearing and the decrease in the size of the ring gear permitting of a smaller rear axle housing, are the main changes in the redesigned rear axle. The general type of the axle is the same as in previous Cadillacs, the bearing mountings being Timken throughout, with a bearing both on the outer and inner ends of the pinion shaft. There are three sets of gear ratios provided, these being 4 10/11, 4 1/2 and 4 2/13 to 1.

Detail Engine Changes

The engine changes are of a highly detail nature, the only internal alteration being in the oiling system in which the oil is now led through the hollow camshaft instead of being forced through an independent copper lead for camshaft lubrication. Sub-leads were formerly

brought from this main lead to the camshaft bearings. In place of these, holes are now drilled in the camshaft at the camshaft bearing points, lubricating these positively from within the shaft and permitting the bearing to be oiled with centrifugal force instead of against

The Changes Summarized

One wheelbase; 132 inches.
Tires 33 x 5 inches.
Rear axle redesigned.
Water drain valves changed.
Thermostat arrangement changed.
Thermostatic air control on carbureter.
Thermostatic control on accelerator pump.
Two pole generator.
Changes in headlamps.
Improved chassis lubrication.
New chain drive adjustment.
Detail changes in bodies.
Two entirely new bodies.
Elimination of tilting steering wheel.
Elimination of spark and gas quadrant.
New gearset lock.
Windshield cleaner and mirror.

Bodies and Prices

Phaeton	\$3790
Roadster	3790
Touring car	3940
Two passenger coupe	4540
Victoria	4540
Five passenger coupe	4690
Sedan	4950
Suburban	5190
Limousine	5290
Imperial Limousine	5390

it. The front end driving chains and the air pump in the gasoline system are oiled from the camshaft. This eliminates the leads and has the advantage of simplicity. Outside of the change in the camshaft oiling scheme, the oiling system remains the same.

Another quite important change in the engine, as far as convenience and accessibility is concerned, is in the arrangement of the water drain valves. It is now possible by means of an ordinary

screw driver to operate the drain valves on the bottom of the water pump from a position above the frame. An indicator dial showing the position of the valve is now in plain sight. The dial reads in three positions, fill, close and drain.

The circulation to each cylinder block is independent of the water circulation in the other, as there are two separate and independent pumps. The thermostatic control of the temperature of the cooling liquid is continued, but there has been an improvement in the thermostat arrangement. Instead of the valves being mounted directly on the syphon thermostat as formerly, there is now a connection with a sort of universal action so that any warping of the syphon cannot cock the valve on its seat. The housing containing the syphon thermostat and the valve are located on the cover of each water pump. It is necessary, in draining the water system, to force the valves operated by the thermostat from their seats. This is taken care of by the shaft operated by the screw driver in draining the system and then the dial is in the *drain* position; the drain port is not only open at the bottom for the water to flow out but the thermostatic valve is also lifted from its seat. The condenser, the purpose of which is to prevent the loss of anti-freeze solution by evaporation, is still employed.

Changes in the carbureter, which now has a 2-in. intake, include the use of thermostatic control for the tension on the auxiliary air valve spring and also thermostatic control for regulating the effectiveness of the accelerating pump, which is a feature of the Cadillac carbureter. The manual setting for the air valve is continued, but superimposed on this manual setting is a thermostat which alters the tension on the air valve spring in accordance with temperature requirements. On a cold engine, the spring tension is increased, thereby adding increased resistance to the opening of the auxiliary air valves, and in warmer weather, the reverse condition holds true, thus tending to provide a leaner mixture for warmer atmospheric conditions.

The thermostat on the accelerator pump, which is located in the fuel chamber, operates a shutter which covers and uncovers a vent, thus increasing the effectiveness of the pump when the engine is cold and decreasing it when the engine is warm. The object of this accel-

ation pump or throttle pump is to force gasoline through the spray nozzle when the throttle is opened quickly for acceleration. When the throttle is opened slowly, the pump has practically no effect on the gasoline. The throttle pump is inter-connected with the throttle and its function is to force compressed air into the float bowl. When the thermostat comes into effect and opens the vent, the pump operation is materially reduced. It is claimed that these changes reduce the warming up period materially.

The Electrical System

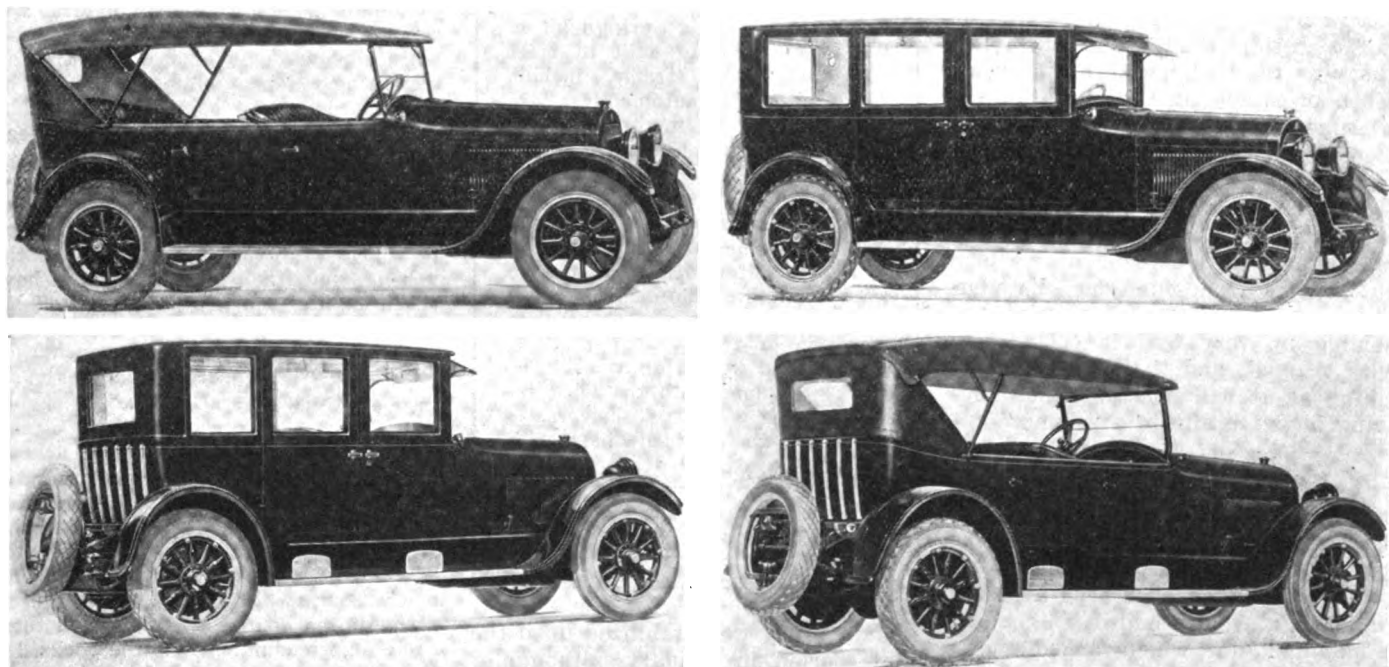
In the electrical equipment of the car, there have been some minor changes.

shaft, formerly lubricated by oil or grease, are replaced by bronze bushings with graphite inserts. These bearings, of course, function without any attention on the part of the owner. The improvement in the grease cup consists of the use of a new type of cup. In this design, a tight fitting piston, operating within a cylinder, forces grease to the bearings under a pressure which is claimed to be between 300 to 400 lb. per sq. in. The piston in the grease cup is operated by a small wing nut.

A new chain drive adjustment is utilized on this model. The Cadillac chain is so designed that enough play is left in the chain, when properly ad-

center of gravity secured largely by the lower wheels is reflected in the appearance of the car. The radiator is higher and the shoulders have been raised and rounded with a result that the entire front end of the car is larger since the higher shoulders on the radiator have necessitated a hood of more liberal dimensions. This improvement in appearance at the front end has been further increased by the use of Bausch & Lomb optical lenses on the headlamps and also on the little lamps on the sides of the car. The lines of the fenders have been altered and the rear quarters of the enclosed bodies have been changed from widely curved to slightly rounded

Some of the New Model 61 Cadillac Bodies



Upper left view is the 7-passenger touring; right, 7-passenger sedan; lower left, 5-passenger sedan; right, 4-passenger phaeton. The two lower views show the Duralumin baggage racks that have been fitted to several of the models

A new generator of the two-pole type instead of the four-pole is utilized. Tilting headlights are continued, but have been materially changed in design for durability and simplicity. The headlights are now mounted on a tubular cross-member which crosses the entire front end of the car at about the center of height of the radiator. The headlamps are mounted on posts which permit of individual adjustment of the position of each lamp. The tilting mechanism for the reflector has been improved so that wear in the operating linkage does not affect the uniformity of tilt in the reflectors. By so arranging the tilting mechanism that it swings over a center to a uniform degree, the tilt in the headlamps is rendered independent of wear in the operating mechanism.

Improved chassis lubrication has been secured by the use of better grease cups, where grease cups are necessary, and the elimination of grease cups where they can be profitably done away with. Bearings on the clutch and brake pedal shaft, clutch release shaft and brake rocker

justed, to permit an oscillation of 1 in. at the periphery of the fan. The adjustment is by means of an electric sprocket shaft. In the earlier models, the camshaft sprockets were integral and had their bearings directly upon the camshaft. This is no longer the case. The camshaft sprockets, which are no longer integral, rotate upon eccentric surfaces located on a supporting member which is clamped into the crankcase by a locking device. The camshaft also rotates in a bearing carried in this support. By turning the eccentric surface by means of an adjusting worm the center distances between the crankshaft sprocket and the camshaft sprocket, or between the camshaft sprocket and the fan sprocket, are increased, thus tightening the chain.

Many Body Changes

In the body and fittings of the car a great many changes of a detail nature have been made which combine to make this car the most attractive Cadillac which has yet been produced. The lower

corners. Two new body styles have been added to the Cadillac line. These are the two-passenger coupé, which resembles the roadster in the arrangement of seats and storage space, and the four-passenger coupé in which entrance to the rear seat is afforded by tilting the seat on the right side.

The interior of the car has been entirely redesigned to carry out the general appearance scheme which distinguishes the car. For the sake of uniformity particular care has been used in the metal selected for fittings. All of the levers and bright metal interior parts are of Duralumin forgings. The non-corrosive quality of this material has been taken advantage of with a result that the windshield wing nuts, the door handles, floor boards, kick plates under the doors, all match in color and style. On the phaeton and sedan bodies, this is carried still further by the adoption of a trunk rack of the same material, which provides six polished strips of aluminum running vertically on the rear end of

(Continued on page 41)

Sales Hold Up Despite Price Cuts

BUSINESS BETTER THAN ANTICIPATED

Introduction of Many New Models Expected to Stimulate Fall Activity

NEW YORK, Sept. 21 — Probably the most striking fact disclosed by a study of conditions in the automotive industry is that they continue to be better than expected. August was the best month of the year. When price cutting began at the end of August the general belief was that there would be a sharp falling off in retail sales on the theory that prospective buyers would hold off in the expectation of further cuts. No accurate data are available on this subject, but reports from numerous distribution centers indicate that sales are holding up very well in comparison with August, and that if there is a falling off it will not constitute anything in the nature of a "slump."

See "Tapering Off"

It is not to be expected that sales will continue at the present level until the beginning of 1922, but neither was it to be expected that business in July and August, which has been a perennial slack season, would be as good as in May and June, which ranked among the best months of the year. Manufacturers believe there will be a gradual "tapering off" the rest of this year, but this "tapering off" is not yet strongly in evidence.

Judging the rest of the year by the experience of the first eight months, the decline in sales will not be as sharp as has been expected. There is in prospect an unusually heavy demand for enclosed cars, and many attractive new models will be brought out this fall at prices much less than those which prevailed a year ago.

Buying Power Greater

Buying power is greater in the South than it has been in many months and there has been considerable stimulation in sales in that section. Farmers are coming back into the market to a certain extent and export trade is slightly better. The truck market, which has been virtually dead for months, is showing signs of life.

There probably will be a few more price cuts, but the indications are that there will be no epidemic of them, and the industry is hopeful that prices will

CONNECTICUT SURVEY SHOWS 2395 MOTOR CARS TO 83 HORSES

HARTFORD, CONN., Sept. 20—A count of vehicles made by the State Highway Department for the National Highway Assn. shows, among other things, the remarkable decrease of horse-drawn vehicles. Figures announced to-day, taken at a point in Thompsonville, between this city and Springfield, on the State highway built to meet interstate motor traffic, include 28,039 passenger automobiles, 2395 motor trucks, 334 motorcycles and 83 horse-drawn vehicles, for a certain period of time. This is about one horse to 372 motors.

The count made was one of many initiated by the national association to secure information for use in road building. The men making it noted the character of the trucks, direction of travel, size of tires, freight, and weight on axles. The work was done with the least inconvenience possible to drivers.

Notice was issued before it started to explain that the inspectors were not stopping vehicles to look for liquor nor were questions asked for any ulterior motive.

remain fairly well stabilized until the show period in January, although a period of sharp competition has returned.

Production for the industry as a whole is running about 70 per cent of the same period last year, but it should be remembered that production at that time had begun to fall off because of the "buyers' strike" which was well under way. A few of the quantity producers are running their plants practically at capacity, but it is probable a majority of the passenger car factories are running at not more than 50 per cent of capacity. It is difficult to estimate truck production, but on the whole it probably does not exceed 25 per cent of capacity. It is impossible to fix percentages of "normal," because what is "normal" for the industry has not been determined.

F. R. Blauvelt Dies

NEW YORK, Sept. 20—Frank Remington Blauvelt, first vice-president of R. K. Carter & Co., buyers for jobbers of automotive supplies, died here this week. He spent most of his business life in the hardware trade.

N. A. C. C. WILL INQUIRE INTO "PIRATE PARTS"

Directors Order Complete Investigation as Many New Companies Enter Market

NEW YORK, Sept. 20—Directors of the National Automobile Chamber of Commerce have authorized a careful and complete investigation of the question of "pirate parts." It is asserted that an increasingly large number of parts of this character are being placed on the market. Many complaints have been made that when they have been used in the manufacture of motor vehicles they have not given good service and have injured the reputation of the cars in which they were used. Some of the vehicle manufacturers say they have taken up the use of "pirate parts" because they could be purchased for prices considerably lower than those charged for the standard parts which previously have been used.

Overspeeding Blamed

Believing that a very large number of accidents are caused by over-speeding of motor cars and motor trucks, coupled with the over-loading of the latter, the N. A. C. C. is calling upon police officials of the country for a more strict enforcement of the traffic laws, of which there are a sufficient number on the books, but the provisions of which have been too generally disregarded.

Reports show that over-loading of trucks of all sizes have in some cases harmed the roads and in other cases have overcome even the powerful brake equipment resulting in accidents that could have been avoided.

Overloading Dangers

The N. A. C. C. believes that a two-ton truck carrying four tons is more dangerous on the highways than a five-ton truck with its normal load of five tons. It endorses the Pennsylvania law which requires each truck to bear a lettering showing its weight, the body weight and the weight of the load which it should carry. The chamber opposes truck bodies of abnormal size, and advocates loads which will conform with the recommendations of automobile and highway engineers for one inch width of tire for each 800 pounds of weight.

Queens Plans Fall Show

FLUSHING, N. Y., Sept. 20—The first annual Queens County Automobile Show will be held in the armory here during the week Oct. 10 to 15.

Central Canada Show Opens Buying

EXHIBITION DISPLAY STARTS BUYING WAVE

Enclosed Cars and Convertible Models Prominent—Spread "Made in Canada" Idea

OTTAWA, ONT., Sept. 19.—The Motor Show at the Central Canada Exhibition held from September 9 to 17 has been one of the most outstanding features of the exhibition.

More than one hundred cars were on view, including such well known models as the Studebaker, Dodge, Cadillac, Reo, Paige, Hupmobile, Hudson, Moon, Nash, Maxwell, Cleveland, Essex, Oldsmobile, Overland, Columbia, Mitchell, Fiat, Willys-Knight, Ford, Chevrolet, Gray-Dort, McLaughlin, Marmon, Packard and Maibohm. Trucks shown were the Maple Leaf, International, Ruggles, Ford, Oldsmobile, Reo, National, and Maxwell.

From the beginning of arrangements for the show, the idea was to make the whole affair a selling event, and nothing in the building detracted from the cars shown. When one came into the building, a rare choice of models took the entire attention, not even an orchestra leading one away from the desire-creating exhibition, the only other furnishings in the whole place being a few comfortable chairs and desks upon which one could sign a contract for the car selected.

Orders Pile Up

The resulting sales have more than justified this idea, and from the opening day orders were booked readily. Enclosed cars and convertible models were prominent, and it is not to be wondered at, the cars of that kind being a real need in such a change of temperature experienced in summer and winter, and an enclosed car means travel comfort at all times. Prominently brought to the notice of the public was the fact that many of the models shown were "Made-in-Canada," while the request to buy Canadian goods and thus keep Canadian workers busy, was displayed all over the exhibition.

George Pink, chairman of the committee and of the firm of Pink & Blackburn, is justly proud of the show, which he claims was far and away ahead of other efforts, and he is a firm believer in good times ahead in the automobile business. This opinion was shared by all the agents and officials in charge of the stands; the time has arrived when business will get going and that right soon, seemed the keynote of the views expressed.

One of the surprises of the show was a "Reo Special" semi-racer roadster with an aluminum body that was built

in the city for the Automotive Sales & Service Co., Ltd. Reo agents, under the direction of Walter N. Deisher, managing director of the company. The chassis in this model was lowered, thus giving the car a most pleasing appearance.

Deisher has sold over 80 Reo speed-wagons in Ottawa, and has still a number of customers interested from the good performances of the ones already in service.

In the accessories department in the Annex, practically all the needs of the motorist were represented. Attractive display here added to the sales rather than detracted, and the men in charge of the different booths had vied with one another to show what a pretty picture can be made out of oils, batteries, wrenches and a host of things that would hardly be considered to have any decorative possibilities.

Two of the largest booths were those of the Keys Supply Co., Ltd., and A. Workman & Co., the latter making a specialty of automobile hardware.

Motorcycles and motor attachments were also in evidence in this section, the growing attention being given to these lines both for business and pleasure being evident by the interest taken by visitors in the exhibits.

The Pageant of Progress parade, arranged by the retail merchants as an opening feature of the exhibition, was entered into with great spirit by the automobile dealers, the chief item in the parade being an old time single cylinder "De Dion Bouton," now in its twenty-second year and accommodated with a ride owing to the respect due to old age. The second very special attraction, going strong all on its own, was a 1901 Oldsmobile accompanied by a number of humorous gentlemen who made jokes about as old as the car as the procession proceeded to its destination to be reviewed by Baron Byng of Vimy on the grounds.

RECEIVERS NAMED FOR CONSOLIDATED FIRM

NEW YORK, Sept. 16.—D. W. Kahn, of 120 Broadway, Robert B. Baird and A. J. Cohen were appointed receivers under a bond of \$50,000 by United States Judge Charles M. Hough for the Consolidated Distributors, Inc., in an equity proceedings yesterday.

The company operates 39 different stores for the distribution of automobile accessories and has its main office in Long Island City. The petition was filed by Chester D. Ireland, of Ridgewood, N. J., who alleges claims of \$24,000. The petition states that liabilities approximate \$2,500,000, with assets in the neighborhood of \$3,500,000.

At its incorporation the Consolidated Distributors, Inc., acquired the business of the Times-Square Automobile Co. of New York, Pennsylvania and Missouri.

MILWAUKEE DEALERS LOOK FOR SALES GAIN

High Prices Held Buyers Back, Distributor Says—Healthy Era Coming

MILWAUKEE, WIS., Sept. 19.—Milwaukee distributors and dealers look for a sharp accentuation of recent improvement in sales as the result of the general price reductions announced by manufacturers, placing most list prices at or below pre-war figures. Discussing the situation, Tom C. MacMillan, head of the Overland Wisconsin Co. and president of the Milwaukee Automotive Dealers Assn., said:

"The whole situation rested with the public, which refused to buy anything except of absolute necessity, because of high prices. Manufacturers have long realized this situation and governed themselves accordingly. As the result our industry is resuming a healthy era. It took more than a year to bring it about.

"It is my opinion that where interests have held back from price reduction they will soon be convinced that the buying public has a consistent unwillingness to buy anything except at prices which they think are right. In the automotive industries 'rock bottom' prices have restored buying confidence. A generous increase in sales of Milwaukee dealers in the last two weeks proves this to be true."

CHEVROLET 490 HAS NEW DESIGN FEATURES

DETROIT, Sept. 17.—With no change in price, the Chevrolet 490 is now coming through with a number of changes. A new one-man top is fitted, the windshield is lowered and Gypsy curtains added. The front seat is lowered 4½ in.

The front axle is provided with new type steering knuckle arms of heavier section and a tapered shank to attach to the steering knuckle. The new knuckles have the tapered hole to match. The king bolts have been increased from ½ to 9/16 in. and are provided with hard bronze bushings. Taper roller bearings are used in the wheels and the grease cup is assembled on the steering knuckle.

The most noticeable change in the rear axle is the use of a spiral bevel pinion and ring gear. The pinion has a new type bearing assembly including both thrust and annular bearings. The brake design has been changed and the emergency brake is now operated with a hand lever.

The alignment of the engine gearset has been improved by assembling these in a unit with the connecting members drilled in a unit jig.

SEPTEMBER STARTS WELL IN MISSOURI

Fashion Shows Feature Opening of Fall Season in Kansas City

KANSAS CITY, MO., Sept. 20—September is starting off with aggressive sales work by the leading dealers, efforts in harmony with the vigorous merchandising efforts of the retailers in other lines of goods. And it is noted that the retailers' efforts have little of the "price-mark" on them—they are selling merchandise, putting the soft pedal on prices. Whereas most stores were talking price even to a few weeks ago, they are holding fashion shows and exploiting styles and nice goods, and attracting business because of the desire created in the public mind and heart to own some of the commodities.

September, therefore, ought to take care of itself, with this "fall opening" spirit and merchandising.

Two big events are being prepared by the motor car dealers for October. First, there will be the annual tour. This will take place Oct. 3 to 8, and cover western Kansas. The dealers are keen for this tour; and they are expecting great things of it. Reports from the "interior" are that local retailers in many lines of merchandise have been doing well, that the farmers have money and are spending it (very conservatively, but spending it) and that motor cars seem likely to be a much better sale this fall than for more than a year. By October, the farmer will know pretty well where he stands; he will have made his settlements or arrangements with his banker, and he will be ready to talk motor cars. Undoubtedly there will be a tendency to withhold buying this fall; and the tour is expected to arouse the old-time enthusiasm in the public for cars, and also to put optimism into the retailer, helping him to go at the fall business aggressively.

Doubtless the tour will draw optimism for the distributors, too, for many of the country dealers are now getting on their

feet, and are doing more business proportionately than the city dealers.

The second event for October is the Enclosed Car Week, Oct. 8 to 15, immediately after the tour. The Kansas City Motor Car Dealers Assn. has indorsed this week. But it has done something more than merely to say that it would be a good thing. The association will prepare and put on a definite, big program of exploitation and advertising of enclosed cars, and will assist dealers to make a real show, in their salesrooms. There will be no central display, each dealer putting forward his own cars in his own establishment, and arranging his own features which will draw the attendance to him. The association will handle general publicity—and as all know, Kansas City has a habit of getting public interest aroused in any motor subject.

The period for the October efforts is auspicious. On Oct. 3, the day the dealers start on their tour, there will be a celebration of the Missouri centennial, with parade, ball and pageant—an event that will distract thought from current troubles, and put the public into a bright frame of mind. A big convention of a woman's national order will be held during this same week. And by the time the motorists get home, they will find the public keyed up and ready to plunge into a week of motor car displays, giving alert attention to them.

FACTORY BRANCH IN EAST ANDERSON MOTORS PLAN

ROCK HILL, S. C., Sept. 20—The Anderson Motor Car Co. has decided to open a metropolitan factory department in New York with every facility to aid its Northern distributors and dealers. The headquarters in New York will be in charge of Charles B. Shanks, vice-president of the company, who took charge of the sales division on July 1. The plans of the company comprehend maintaining in New York a stock of cars for the needs of the New England States, New York, New Jersey, Delaware, Pennsylvania and Ohio. A complete parts stock for all present and past models will be kept on hand and service men from the factory will be stationed in New York.

CHICAGO REVISES INSURANCE POLICIES

Hereafter Firemen's Company Will Look Into Record of Car Owner First

CHICAGO, Sept. 17—Radical changes in its method of writing automobile insurance have been announced by the Firemen's Fund Insurance Co. Agents are being advised of a revision in the acceptance limits on automobiles and a change in the general conditions under which such insurance may be written.

Within recent months the fire feature in automobile insurance has come to the front with unusual force, and theft risks are no longer considered the source of only loss. Losses from both causes are no longer confined to large cities, but are spreading through the rural districts in such number as to cause alarm.

Insure for 90 Per Cent

Under the new rules cars will be insured for not more than 90 per cent of their list price, irrespective of freight, war tax and the ordinary equipment. Second-hand cars will carry not more than 80 per cent of their purchase price; full particulars must be furnished on all mortgaged second-hand cars. Used cars in the hands of the original owners will be insured for a percentage of the list price after allowing for depreciation, according to the rule printed in the rate sheet.

No cars are to be insured for a period longer than one year, and authorization must be secured before dealers' lines and finance companies' business is written. New policies are to be declined on cars more than three years old, except under special authorization, while there is a long list of exceptions of cars manufactured before 1920.

Agents are required to decline insurance on cars unless they are personally acquainted with the applicant and his financial standing, and if there is any question as to his ability to own and maintain a car, the company is to be given the benefit of the doubt.

New York Automobile Dealers at Their



"Best ever" was the verdict of more than 200 of the fellows who sell motor cars along the "White Way" who Island, Tuesday, Sept. 13. Here's how they lined

RUMOR DURANT WILL PURCHASE PEERLESS

Announcement Expected to Follow Meeting But Conference Was Not Held

CLEVELAND, Sept. 20—Reports have been current in Cleveland that an announcement would be forthcoming soon concerning the sale of the Peerless Motor Car Co. to W. C. Durant of Durant Motors, Inc., and it was expected that the announcement might follow a meeting which was to have been held. The meeting, however, did not materialize.

B. G. Tremaine, president of the Peerless company, attended a meeting in New York, Tuesday, but other officers of the company have declined to state what subject was taken up.

The report of the sale which has been in circulation is responsible largely for the increase in Peerless stock, which has gone up from \$25 a share to \$40. The Peerless company is a \$10,000,000 corporation and the Peerless plant in Cleveland covers 20 acres. The company is the only one here which manufactures an eight-cylinder car. It is said that if Durant takes over the company production will be doubled.

WILLARD BRINGS OUT "ALL-RUBBER" BATTERY

CLEVELAND, Sept. 20—No wood enters into the construction of the new all-rubber battery now being manufactured by the Willard Storage Battery Co. The plate assemblies are contained in compartments which are formed by rubber-dividing walls, which are integral with the molded rubber case. Thread rubber insulation is used. The sizes in which this new battery is being produced and the retail list price are as follows:

6-volt, 11 plate.....	\$47.30
6-volt, 13 plate.....	53.90
12-volt, 7 plate.....	61.95
Ford size.....	35.00

The price on the Ford size of the new battery is the same as for the thread rubber battery for Fords with wooden case.

N. A. C. C. REPORT SHOWS AUGUST SHIPMENTS 2% MORE THAN JULY AND 72% OF AUGUST IN 1920

NEW YORK, Sept. 17.—Reports of August shipments of cars and trucks made to the National Automobile Chamber of Commerce by its members show that there was an increase of 2% over shipments for July and that the total was 72% of the shipments for August, 1920. In August last year, shipments were 14% less than in July. Shipment figures by months thus far this year are:

	Carloacs		Driveaways		Boat	
	1920	1921	1920	1921	1920	1921
January	25,057	6,485	29,283	3,185	....	93
February	25,057	9,986	43,719	7,507	....	99
March	29,326	16,287	57,273	9,939	....	75
April	17,147	20,187	64,634	14,197	....	1,619
May	21,977	18,608	74,286	15,193	....	2,381
June	22,516	20,269	60,746	18,834	8,350	3,947
July	23,082	19,470	52,342	15,320	8,702	3,725
August	23,386	20,350	31,060	14,290	7,095	3,565

DECATUR DEALERS LOOK FOR PROSPEROUS AUTUMN

DECATUR, ILL., Sept. 20—Decatur dealers are united in declaring prospects for a fall season were never better. Steady corn prices, they believe, will double their trade, and one dealer says four prospects will sign when corn hits 50 cents.

"We have learned that we must earn every order we get," explained the dealer, "but the big thing is that people are buying once more. Never have we had such a bunch of live prospects."

"Sedans are the most popular jobs now," commented a third, "but cars are fairly easy to get and we can handle all the business coming in. The person ready to buy a car can usually procure the difference between an open car and a closed one, and will do it. We anticipate a big fall season."

Moon Sales Grow

ST. LOUIS, Sept. 20—The Moon Motor Car Co., which last week made a sharp reduction in prices of its cars, based on 1914 labor, material and production costs, announces that domestic sales for the first six months of this year were 14 per cent larger than for the same period last year. With the lower prices it is expected that the last half of 1921 will equal or exceed the first half.

PORTAGE STOCKHOLDERS PLAN REORGANIZATION

BARBERTON, OHIO, Sept. 20—Stockholders of the Portage Rubber Co. have made plans for reorganization and refinancing under new management by the issuing of \$1,000,000 in first mortgage sinking fund bonds. Present stockholders will be given first chance to purchase these bonds which will bear 8 per cent interest. The present common stock, which has no par value, will be withdrawn and new common issued. Creditors of the company and those with which it has fabric commitments will be asked to accept the mortgage bonds. It is expected that E. A. Tinsman will be vice-president and general manager.

China Plans First Show

SHANGHAI, CHINA, Aug. 31 (*By Mail*)—China's first automobile show, will be held in Shanghai in November. The show will become an annual event and great preparations have been in progress to make it one of the most striking demonstrations the Republic has known. The good roads movement in China is actively supporting the show.

Louis F. Kaufman Dies

INDIANAPOLIS, Sept. 20—Louis F. Kaufman, 67 years old and for several years manager of the service department of the Midwest Engine Co. of this city, died at his home.

Annual Outing at Fred Wagner's Farm



participated in the annual frolic of the New York Automobile Dealers Association, at Wagner's Farm, on Long up when the camera man said "See the birdie"

SYRACUSE WILL HAVE ENCLOSED CAR WEEK

*Second Exposition of Kind to
Be Held October 15 to 22
—20 Cities Enter*

SYRACUSE, Sept. 17—The second annual enclosed car week of Syracuse automobile dealers will be held October 15 to 22, and will consist of a week of special displays at each of the salesrooms, following out the line established at the initial event last year. Some sentiment in favor of an enclosed car show at the state armory here was shown at the meeting of the Syracuse Automobile Dealers Ass'n, but the majority was of the opinion that the enclosed car week will more suitably mark the formal opening of the fall and winter sales season.

Plans Have Started

Preliminary plans for the event have been started by President George Norris of the association and Secretary Howard Smith, who are working for a greater celebration than the one held last year. An enclosed car parade, special decorations in the salesrooms and other features will be carried out to show the utility of enclosed models.

A movement, the outgrowth of the event held here last year, is now under way for a national enclosed car week, which it is expected will be pushed forward at the meeting of the National Association of Automobile Show and Association Managers in Chicago. Secretary Smith will represent the Syracuse association at the convention. The proposed event has the endorsement of the National Automobile Chamber of Commerce and the National Automobile Dealers Ass'n.

About twenty cities this year will stage events similar to the enclosed car week here, according to information received by the local association. The actual working out of these plans will be accomplished at the Chicago meeting.

Prospects Brighter

Syracuse automobile dealers in the past week have found business prospects brighter than has been the case in the last three months. All express confidence in the outlook for the future and report considerable increase in interest among purchasers. All kinds of retail trade and many industrial firms appear to be getting a good share of the increase in buying, with the result that the automobile dealers are getting inquiries for both new and used cars. It is expected that sales, which have been falling off since July 18, will show a large increase in September over the August figures.

Hoosier Sales Gain

INDIANAPOLIS, IND., Sept. 15—In spite of gloomy predictions during the first two weeks of the present month, retail sales have increased slightly during the latter part of the month, so that now retail dealers are predicting that

September will fall very little behind August sales and perhaps will equal the business done last month, the increase applies to cars of every sort as regards price.

Low priced cars appear to be selling in about the same percentage as compared with last month as high priced cars are. Of particular interest to the retail dealers here is the fact that the used car market appears to be more active. For a time this spring the demand for new cars was handicapped to a great degree by a sluggishness in the demand for used cars. For a time it got to a point where the retail dealer was very careful concerning the taking in of a used car on a trade. During the past month large stocks of used cars have been diminished to such a degree that the retail dealer is feeling better about his new car market.

CANADA TO CHARGE FEE ON ALL FOREIGN GOODS

OTTAWA, ONT., Sept. 17—The government has been empowered to institute a system of certificates to be attached to all invoices of foreign goods imported into Canada at the last session of Parliament. It is proposed to charge a fee of \$2.50 for certificates on invoices of \$100 or over, these certificates to be signed by a Canadian trade commissioner, British consul or other person duly authorized.

Canada spent \$240,000 in paying expenses of the various trade commission officers and received nothing in return during the year. The United States Consulate during the same time spent about \$270,000 and received in fees something like \$500,000 from Canada's exports of about \$500,000,000.

TROLLEY BUS PURCHASE LAID OVER IN DETROIT

DETROIT, Sept. 12—Purchase by the city of trolley buses, such as demonstrated by Packard, has been laid over until after the October election to permit an amendment to the charter. The present charter will only permit the railway commission to purchase the regular type trolley car. An amendment to provide for the purchase of gasoline buses or other types of trackless trolleys will be substituted. A three-fifths vote will be necessary to pass the amendment.

TORONTO EXPERIMENTS WITH TRACKLESS CAR

TORONTO, ONT., Sept. 20—The City Transit Commission, which has recently taken over the trolley lines, has begun experimentation with trackless gasoline propelled motor buses for use in some sections of the city. A bus of the Fifth Avenue type and a Tilling-Stevens vehicle of the type used on London streets have been procured and will be tested out in the search of the Toronto commission for a vehicle best adapted for local uses.

ROCHESTER ARRANGES ENCLOSED CAR WEEK

*Second Show of Kind Expected
to Swell Fall and Winter
Sales*

ROCHESTER, N. Y., Sept. 12—Rochester's Enclosed Car Week, set for the last week in October at the State Armory, will mark the second enclosed car show that Rochester has had, and it was the sales of last year's show that spurred the dealers on to action again this year, for business boomed strong in the enclosed car world with the coming of the winter months last year.

Thirty-three dealers who were represented at the show last year sold more than \$100,000 worth of cars, besides obtaining a long prospect list which produced good results following the show, and this year it is expected that more than fifty dealers will show cars in an effort to boost their sales. Sales haven't been any too good this summer, especially those firms which have done but little advertising, and these firms look to the show to put them back on their feet.

Conservative Ads

Conservative rather than "loud" advertising will again be the feature of the show this year. It was this "conservative" attitude, dealers declare, that made the show the success it was during October last year. No glaring banners announcing this or that car greeted the spectator at the show, there were no signs telling what the price of each car was, nor was the dealer's name mentioned; but each patron, upon entering the New York State Armory, was handed a small paper folder, and inside was a diagram of each of the booths at the exhibition. The space was marked out on this card, telling where each car was and the name of the dealer who sold that particular make of car.

Some dealers are not content with selling simply to the patrons of the show, but conduct private showings in their own salesrooms during enclosed car week, directing their advertising in the newspapers more toward their own display in the salesroom rather than the exhibit at the show, for they figure the show has been extensively advertised as a whole, and a patron will be sure to visit the booth if he or she comes to see the show.

Dealers usually make it a practice of advertising their second-hand cars in their own salesrooms, saving the new cars for display at the show. Already two or three dealers plan to follow this procedure again.

Add 2000 Willys Workers

ELMIRA, N. Y., Sept. 20—The Willys-Morrow Co., a subsidiary of the Willys-Overland company, which manufactures parts for Overland cars, has called back to work 2000 former employees. The plant has been closed for several weeks.

INDIANA DEALERS TO CONVENE NOV. 16

First Annual Convention Ex- pected to Draw 2,000 Auto- motive Dealers

INDIANAPOLIS, Sept. 16—First annual convention of the Indiana Automotive Trade Assn. will be Wednesday and Thursday, Nov. 16 and 17, in Indianapolis. Members of the board of directors, meeting here to-day, expressed the belief that the work of the association in its first year has been of such value to the automotive industry of Indiana that this first annual convention can be expected to draw not less than 2000 automotive merchants. Most outstanding figures in the industry will be sought for the program. Harry G. Moock, general manager of the National Automobile Dealers Assn. has assured the Indiana directors that the national organization will give every possible aid to developing for the Indiana convention a program of unsurpassed merit.

Many Big Features

The tentative program placed before the directors by L. M. Shaw, secretary-manager, embraces many big features. An address of welcome by Governor McCray, a response by President N. H. Cartinhour, reports of president, secretary and treasurer will take up the first two hours of the opening session on the first day. Appointment of committees on nominations, etc., will be made at the close of this first session. In the afternoon of the first day the program will include an address on "The National Association," by Harry G. Moock, general manager; "Merchandising Automotive Equipment," "Sales Promotion and Building a Prospect File," "Analysis of Territory," "The Future for Our Business."

Annual Trade Frolic

On Wednesday night will be the annual trade frolic. This probably will be in conjunction with the Indianapolis Automobile Trade Association. The second day program will include addresses on "Used cars and the merchandising of them," round table sessions and forums by passenger car dealers, truck dealers, battery businesses, accessory dealers, garage men and jobbers. This will be in the luncheon hour and in the afternoon will be the regular business session, and election of officers.

The directors voted that the I. A. T. A. should make a contribution to the Pueblo relief fund, giving the minimum amount because of the heavy expenses incident to promotion of the State convention. Investigation of an insurance plan for members of the State association was ordered, in addition to ordering the purchase of some special equipment for the office for handling of bulletins and other literature by mail.

STATE'S \$9,289,363 MOTOR FEES SET NEW HIGH MARK IN RECEIPTS

ALBANY, N. Y., Sept. 20—Approximately \$3,000,000 will be distributed this week by John Lyons, the Secretary of State, in the monthly division of motor vehicle receipts between the state and counties. The sum is the largest ever distributed from this source by the office of the Secretary of State.

New York City's share of the \$3,000,000 will be \$433,187.38. This sum will go into the city's general fund.

Up to July 1 the Motor Vehicle Bureau had receipts of \$9,289,363.32, accruing from the registration of automobiles and motorcycles and the licensing of chauffeurs and operators from Feb. 1. This sum establishes a record.

W. A. PATERSON, PIONEER OF INDUSTRY, DIES

DETROIT, Sept. 16—Through the death of William A. Paterson in Flint last week, one of the notable figures in the automotive and, preceding it, the carriage building industry, has passed away. He was the founder of the W. A. Paterson Co., manufacturers since 1869 of carriages, and since 1908 manufacturers of the Paterson automobile.

Mr. Paterson was born in Fergus, Ont., Oct. 14, 1838. He came to Flint in 1869, founding his carriage business in that year. The carriage work was discontinued in 1910, two years after his advent into the automotive field. Affiliated in the company with him were W. C. Paterson and W. R. Hubbard. No action will be taken for the present on selecting a new president and manufacturing will be continued along former lines.

At his funeral six pioneer employees of the Paterson company were active bearers. They were Daniel Elston, Wayne Easler, Charles Stewart, M. Cooley, Fred Coates and Ernest Kollmorgan. The honorary bearers were J. Dallas Dort, Arthur G. Bishop, Horace C. Spencer, D. D. Aitken, George W. Cook, M. W. Corliss, George Archer and F. H. Rankin.

Dragon Motors Under Fire

CHICAGO, Sept. 20—Alleged misuse of the United States mails and violations of the State blue sky laws by the Dragon Motors Corp., a concern capitalized at \$1,000,000, are being investigated by Federal and State authorities. The corporation's product, advertised as "America's most elegant motor car," was manufactured here, although it is claimed only 13 cars were ever turned out of the plant. New York offices of the concern have been closed.

REDUCTIONS SWELL COLUMBUS BUSINESS

Demand Greater Than Antici- pated—Employment Situa- tion Improves Steadily

COLUMBUS, Sept. 17—With the reduction in prices of the Ford, Overland, Oldsmobile, Chevrolet and several other makes, trade in passenger cars in Columbus has been stimulated. All of the dealers who handled the makes on which reductions were made reported increase in demand with business much better than was anticipated.

Other lines have been selling fairly well and dealers report a fair business. When present unsettled business conditions are considered business is believed to be better than might be expected. One of the things that strikes the dealer is the fact that the salesmen have to go out after the business and that the hustler is the one that produces. In other words there are less "drop ins" so to speak than formerly and the dealer who wants to make a showing is compelled to hustle for prospects and for contracts.

Unemployment Improves

The unemployment situation in Columbus has improved to a certain extent recently and this has the effect of instilling optimism into the dealers and salesmen. The feeling in industrial circles is improved to a large degree and orders are not quite so hard to land as formerly. Prospects for the future are considered fairly good and dealers in passenger cars believe that the fall months will show a considerable volume of business.

The enclosed car show, scheduled for early in October, is expected to stimulate trade in enclosed jobs. This show is expected to instill an interest in the enclosed cars which have been gaining in popularity right along. Only enclosed jobs will be admitted to the show which will be under the auspices of the Columbus Automobile Trade Assn.

Corn Crop Will Aid

The farmer demand has not increased to any extent, although some dealers in agricultural sections profess to see brighter things in the future. With a better corn crop than was expected, farmers are expected to buy automobiles during the fall and early winter months.

The chief demand for passenger cars is for cars ranging in price from \$800 to \$2,500. Of course, there is a good steady demand for higher priced cars but this is not large.

Repair work is rather active for the time of the year. Many of the downtown shops are full of work while the smaller shops in the outskirts report quiet business. Service stations are having a fairly good business, according to their managers.

In general the automotive industry has taken a brighter aspect.

TEXAS GETS GOOD SEPTEMBER START

*First Ten Days Show Record
of Daily Average for Year
—Truck Sales Gain*

DALLAS, TEX., Sept. 19—The automobile business in Texas started off with a rush in September. Reports from dealers and distributors in Dallas for the first ten days of the month showed more cars sold per day than any similar period during the present year. As was the case during August, when the retailers of Texas just about established a record business, the majority of the sales were medium priced cars. Retailers attribute the increasing number of sales to continued reduction in prices. The prospective customers appear to think the bottom prices have been reached and they are taking advantage of recent reduction, probably fearing there will be an advance before other reductions come.

Dealers in high priced cars report business stimulated by recent reductions in moderately priced automobiles. They say it gives the public confidence and that they are selling more cars than before.

What was true with the Dallas retailers was true of the retailers of Fort Worth, Wichita Falls, Waco, Abilene, Amarillo, Sweetwater, San Angelo, Temple, Houston, Galveston, Beaumont, Denison, Sherman, Greenville, Gainesville and a half dozen other Texas cities, according to reports received here.

Accessory men said business was better than any ten days for the past twelve months. The garage men said they had all they could do. The tire men were kept busy days and parts of the night.

Truck dealers reported considerable sales with more prospects than they have had for months. They declare the good grain crops with good prices and good cotton crops with good prices are making the truck business worth while. Many of the truck men continue to report sales of from three to five trucks to one man.

The tractor trade and the trailer trade are holding their own. Tractor men declare they expect a good business between now and the first of the year, and that inquiries led them to believe the business, which has been dragging, will be getting on a better basis before another month is gone.

2,500 MEN BACK AT WORK AT OVERLAND

TOLEDO, Sept. 20—More than 2500 men were put back to work last week by the Willys-Overland Co. at the local plant and 2000 were recalled at the Willys-Morrow plant at Elmira, N.Y. The latter plant makes parts for the Overland automobiles. John N. Willys announced here this week that production would be

doubled and more men put back to work.

In the last month reductions have been made in the working forces as the selling activities of the company slacked but with the third price reduction announced recently in effect sales boomed so that a reaction was necessary at the plants.

L. J. McCracken, who recently established a sales record for Overlands at Bridgeport, Conn., will assume management of retail sales for Toledo, succeeding Lewis P. Kinsey, on Oct. 1. Kinsey, who has been long identified with Overland, is leaving the motor field.

With the development of new sales policies and the pick-up in sales the last week, more activity is reflected in the automotive subsidiary plants here, including the Electric Auto-Lite Corp., Tillotson Carbureter Co., Mather Spring Co., and others.

MOTOR SHOW BOOSTS WILMINGTON SALES

WILMINGTON, DEL., Sept. 20—The local motor trade has been boosted as the result of an automobile show held in connection with the Delaware State Fair here all last week. For the purpose the fair association turned over to the automobile dealers all of the large exhibition building under the concrete grand stand, a fireproof structure. About 30 makes of cars were exhibited here. Nearly all of the exhibitors reported sales, while all have many prospects. Upwards of 150,000 persons attended the fair and most of them visited the motor show, which was free.

In addition to this, there was an interesting tractor demonstration each day in the open, while the tractor dealers had their exhibits under large tents. They interested the agricultural visitors and proved a trade developer in their behalf.

CHEVROLET BRINGS OUT ORGANIZATION PAPER

DETROIT, Sept. 20—Chevrolet Motor Co. has issued an organization paper, the *Chevrolet Sales Speedster*, which will be issued twice monthly "in the interests and for the inspiration of all who cooperate in the sale of Chevrolet transportation." The paper is practically dedicated to the proposition that the Chevrolet Model 490, as the second lowest priced car on the market, is entitled to be the second largest owned car on the market.

The aim of the paper is entirely directed toward improving the merchandising efforts of Chevrolet dealers. In the first issue dated Sept. 1 leading articles are headed: "Talk Quality First Then Price" and "A Famous Model Improved." Special appeal is made for concentration on sale of Chevrolet commercial cars. In one of the articles attention is called to the 42,809 rural mail routes still served by horse-drawn vehicles. Each of these is held forth as a Chevrolet prospect.

OHIO FAIRS PROVE BUSINESS GETTERS

*Good Sales Reported Following
Exhibitions—Dealers Pre-
dict Greater Fall Trade*

CLEVELAND, Sept. 20—The county fair in Ohio has proven a good source of business for the dealer who has cultivated carefully the people who visit such exhibits. Sales have been beyond the average made at the annual county exhibit. The fair season has just started, and, as it will continue through September and October, dealers who have been following fairs are predicting even better business than they have enjoyed.

The fairs came at the close of the harvest, and at a season when the farmer has the most money on hand. He has sold his crops and has not invested the proceeds, as he has so often when the annual winter automobile shows are held. The farmer is about the most prosperous class of the present day. He has not been out of employment and the weather in Ohio has been kind to the agriculturist. True, he is not getting the prices for his farm products that he did a year or two ago, but he has not been affected as has the industrial workers in the cities.

Men wise in the retail automobile business have been quick to take advantage of the county fair this year. They have sent their best salesmen with their exhibits, and the companies and salesmen have made good money. The Cuyahoga county fair, which was held in Chagrin Falls, was a good business getter for automobile exhibitors. The attendance broke all records, and never before did retailers have such an opportunity to get their wares before the farmers.

CADILLAC OUTPUT NOW ON 20,000 A YEAR BASIS

DETROIT, Sept. 20—Cadillac Motor Car Co. has resumed production on a schedule as great as that of last year, it was announced at a convention of Cadillac's 100 distributors at the factory this week. In 1920, annual production was on a basis of 20,000, representing practically 100 per cent capacity.

"Indications from all parts of the country," said H. H. Rice, president and general manager, addressing the convention, "show generally improved conditions affecting the purchase of motor cars. Business men can look for a more receptive mood from the buying public from now on. We believe the bottom has been reached and that real recovery is actually in progress almost everywhere."

The distributors were taken on an inspection trip through the new plant, and were much impressed with the company's preparation for better business. In their remarks it was indicated that complete confidence dominated the sales organization of the market awaiting the Cadillac fall offerings.

COTTON PRICE BOOM HELPS INDUSTRY

Atlanta Distributors Believe Conditions Will Bring Trade Back to Normal

ATLANTA, GA., Sept. 20—The tremendous boom in cotton prices during the early part of September has proved one of the best tonics for the automotive industry throughout the South, and will, it is the consensus among the Atlanta distributors, serve to rapidly bring the industry back to its normal status if the cotton prices now existent hold to that point for any length of time. In actual money volume the increase of more than \$40 per bale during the early part of the month means something like \$300,000,000 on this year's crop alone, to say nothing of the millions of bales of last year's crop that are still being held on southern farms and in the warehouses. With one of the shortest cotton crops in history there is little prospect of prices lessening for several months, while there is every indication that the staple will likely reach 25 cents per pound before the end of September.

This increase in cotton prices not only materially elevates rural buying power so far as the automotive industry is concerned, but it has its very favorable effect on every line of commerce and industry throughout the entire South, primarily the retail business. It therefore increases the buying power of commerce and industry at the same time and this, it is the opinion of the various distributors, will have the effect of materially stimulating the truck and commercial motor car business.

Automotive sales during August—and this was before cotton began its big advance—were better in this section than they have been in many months; and now with cotton having reached a substantial price, September business in the automotive field will undoubtedly surpass any single month in more than a year.

BUICK ATLANTA SALES FORCE ORGANIZES

ATLANTA, GA., Sept. 14—A permanent organization of Buick retail salesmen was formed at a meeting of the company's Southeastern representatives held at the Atlanta Chamber of Commerce Sept. 6 and 7, the organization being divided into two separate groups. The first group was definitely formed at the Atlanta meeting and the second group is to be formed at a meeting to be held in the near future at Chattanooga, Tenn. Meetings of the retail salesmen are also to be held at Montgomery, Ala., and Daytona, Fla., during the next month.

These organizations will comprise retail salesmen only representing the company's various dealers and distributors in the Southeastern area in

the territory covered by the Atlanta branch. Officers of Group One were elected as follows: C. S. Culver of Gadsden, Ala., president; E. T. Brigham of Dublin, Ga., vice-president; E. W. Tomlinson of Atlanta, secretary; directors, J. B. Friday of Charleston, S. C.; J. Leon Prior of Madison, Ga., and G. W. Brooks of Macon, Ga.

New Model 61 Cadillac

(Continued from page 33)

the car between the tire carrier and body, carrying out the decorative effect in a very successful way.

The entire front compartment has been made over from top to floor. All of the fittings have been made uniform, the instrument board conforming with the scheme of decoration on the car. The steering wheel is now made entirely of selected walnut even to the spokes. The horn button is of the same wood, and the rim of the wheel is molded to fit the driver's hand and is as free from metal as it is possible to make it. The tilting feature of the steering wheel, a characteristic of former Cadillacs, has been discontinued. The spark and throttle levers have been altered and in place of the quadrant, they have been replaced by a compact arrangement which eliminates the sector and brings the control in closer to the steering column. Only the finger grips of the new levers are exposed.

The instrument board is convenient and simple. It comprises a jet black oval plate in the center in which are mounted the switch levers and switch lock. On this plate is the Cadillac crest finished in enamel and gold. Below the oval plate and at either side are the buttons for controlling the fuel mixture when starting and deflecting the headlights. The dials of the ammeter and pressure gages are combined into one instrument at the left, which balances with a similar circle containing the clock and speedometer similar to the previous arrangement on the right. A single lamp is carried directly over the combination switch plate to illuminate the dash. All of the detail work about the front compartment has been gone over to bring it up to the artistic standard which has been set. The pedal pads are forgings of Duralumin and the adjustment for the extension of the pedals has been discontinued to increase the cleanness of design. The hand brake now has a polished nickel grip in place of rubber. A new transmission lock has been provided supplementing the switch lock, and the switch key fits the transmission lock as well as the tire lock. The ventilator has been increased in capacity and is now operated by one motion of a small lever placed beneath the cowl. A windshield cleaner and an adjustable rear view mirror on the windshield are included in the standard equipment.

All of these changes have been made without altering the specifications of the car, which remain the same. The price remains the same and the weight of the car remains the same.

TEXAS SHOW PLANNED FOR OCT. 8th TO 22nd

Forty Various Makes Will Be Placed on Exhibition— Future Bright

DALLAS, TEX., Sept. 19—Forty different makes of automobiles, a dozen different brands of trucks and a variety of automobile accessories, tires, etc., will be displayed at the annual automobile show of the Dallas Automobile Trades Assn. held in connection with the State Fair of Texas here Oct. 8 to 22. The forty different makes of automobiles means probably more than 150 cars will be on display, while it is certain that a score of trucks and trailers will be exhibited. Every space in the big exhibition room at the Fair grounds has been taken and many of the dealers here and out of town were not accommodated. In connection with the automobile show, some of the leading men in the industry in America will be in attendance. Many of the exhibitors, through Dallas distributors, will bring special built cars for the show, it was said. These will be shown the retailers who are supplied through the Dallas distributors.

In as much as the attendance at the fair will be more than a million, the dealers of Dallas are expecting a wonderful improvement in the trade in this section as a result of the show. They expect to close many deals during the show at the showrooms and more of them at their downtown places of business, where expert salesmen and demonstrators will be at the beck and call of the men in charge of the displays. Dealers are attempting to hurry up shipments of cars to be disposed of during the show. Some of the retailers of Dallas expect 300 new cars to be disposed of as a direct result of the show and as many more to go before the first of December. The dealers will keep an index list of all prospects obtained at the show, and keep everlastingly after them after the show until they own some kind of automobile.

50 PER CENT INCREASE IN FORD ORDERS BY CUT

DETROIT, Sept. 15—The Ford Motor Co. to-day reports an increase of 50 per cent in orders during the first week following their newest price reductions, Sept. 2.

Orders had fallen off in August, due to late summer influences, and some slight stocking has been experienced in the company's 35 branches throughout the country. All of this stock was cleared out in this first week, and deliveries are already running behind, especially on enclosed types.

The factory reports orders piling up to an extent that will practically insure capacity production on the present 100,000 monthly basis during September and October.

Activities Among the Dealer Organizations

Washington to Have Show

WASHINGTON, D. C., Sept. 20—Under the auspices of the Washington Automotive Trade Association an enclosed car salon will be held during the week of Nov. 14 to 19, inclusive. Convention Hall, the largest building of its kind in the city, has been secured, and it is expected that every passenger car dealer in the association, which organization embraces 98 per cent of the automotive trade, will be represented.

Enclosed car weeks have been held in the past with a great deal of success, but this is the first time that a salon of this nature has been undertaken. It is expected to be productive of good results.

With the change of administration on March 4, this year, the first in eight years, there has been an influx of new people to Washington. Already there are indications that the coming fall and winter will find a great deal of social activity in Washington. Many who will take part in these activities were here for a time in the spring, going away for the summer months, and others delayed their taking up a residence in Washington until fall. By the time the salon is held these people will all be settled for the winter, and many of them are prospective buyers for enclosed cars.

In addition, the Disarmament Conference will be in session. This will bring a large following not only of those directly connected with it but of those indirectly interested.

As was the case of the enclosed car weeks and the automobile show of last spring, the event will be advertised under the auspices of the association, both through the newspapers, by means of placards and on the street cars. The newspapers will co-operate to the extent of carrying the stories of the salon, and in all probability will publish special show numbers on the day preceding the opening.

Hoosier Dealers Meet

INDIANAPOLIS, IND., Sept. 19—At a meeting of the board of directors of the Indiana Automobile Trade Association held at the Columbia Club the board went on record as endorsing the action of the secretary of state in making it possible to distribute automobile licenses to the different branches of the Hoosier State Automobile Association. Members of the board feel that such distribution will greatly facilitate the issuance of licenses and will take much work off the secretary of state's department. The action was only a forerunner of a movement which will be launched before the next General Assembly, which will result in a bill being introduced, to so word the license law that licenses may be issued in every county in the state by county officials. While it has not been decided as yet what officials will be recommended for this task, the opinion now is strongly in favor of the county recorder.

Present state laws provide that in addition to the cash outlay for a license there is an additional expenditure of \$1 for what is known as an ownership certificate. It is pointed out by those favoring the county distribution that by issuing licenses from the recorder's office the ownership certificate feature might be done away with, the owner having the recorder's receipt of the machine recorded, while a part of the dollar that is now charged for this work might go in fees to the recorder for his trouble.

It was decided that the state convention of

the Indiana Automobile Trade Association should be held in Indianapolis, Oct. 16 and 17. Lynn M. Shaw, manager of the organization, was given full authority to proceed with arrangement for the convention. The exact place has not been determined. Those who attended the meeting were N. H. Cartinhour, Indianapolis, president; J. Cooper Props, Muncie, first vice-president; J. F. Frohbieter, Evansville, treasurer; M. T. Johnson, Vincennes; W. E. Robinson, Terre Haute; F. W. Kelsey, Huntington, and Wm. Nichols, South Bend, members of the governing board.

Bloomington Talks Show

BLOOMINGTON, ILL., Sept. 17—Members of the Bloomington, Ill., Automobile Dealers Association are discussing a proposed fall show of cars around the public square in order to stimulate fall and winter business. There is a difference of opinion as to the wisdom of such an exhibit and the plan will be considered carefully. Among most of the dealers the business of the summer has been highly satisfactory and they have sold all the cars they could obtain from the manufacturers. Those who have enjoyed such prosperity naturally argue that the expense of a public display is hardly necessary. Others maintain that the indoor show in the winter and the outdoor show in the summer or fall are necessary to demonstrate the activity of the industry and stimulate business during spells when a lull threatens. The weather is always a leading factor in the success or failure of outdoor exhibits, and this is being given due consideration. A decision in relation to the proposed display will be reached shortly. The association is also interested in a suggestion advanced here of a coupon book to be carried by long distance motorists, to be issued by the national association of dealers and which will be honored at any garage to cover repairs or supplies necessary upon the road. These books could be issued in amounts ranging from \$100 up, dealers punching out the amount due and collecting from the national organization, semi-annually or annually. This would do away with the present necessity of tourists carrying large sums to cover current expenses. The idea might be worth consideration.

New Rochester Organization

ROCHESTER, N. Y., Sept. 20—A new association, to be known as the Rochester Tire & Accessory Dealers Association, has been launched here with an object to drive out of business the dealers who attempt to dispose of merchandise in the tire and accessory business which will not stand the test of good materials. A second plan of the new organization is to buy collectively, thus lowering the prices on many commodities.

A committee appointed at a previous session to go to Akron and other tire centers to get the best proposition that any manufacturer could offer to the members of the association was heard and the first concerted action of the association will be to place on sale in Rochester a 30 x 3½ tire which will be guaranteed by the manufacturer and reputable dealers handling them. The 30 x 3½ tire was selected as a first enterprise because it is realized that a man buying this size and hoping to obtain a bargain by buying a cheap tire is often the very person who is least able to stand the loss sustained through the purchase of an inferior product.

Officers elected by the association are as follows: President, Charles S. Owens, former sheriff; vice-president, James Rutherford; treasurer, Henry Rowerdink; secretary, Grover C. Kingdon.

Parts Jobbers Organize

SAN FRANCISCO, CAL., Sept. 16—The Automobile Parts Jobbers Association has been organized here with membership limited to those firms and individuals who are engaged in the jobbing of automobile, truck and tractor parts to the repair and garage trade. This eliminates factory representatives or agents as members. Offices have been established and Frank Kreybill, Jr., elected president for one year, with Robert B. Young, secretary, and Bryce Howatson, treasurer. Members are announced as follows:

Patterson Parts, Inc., Triangle Parts Co., Bryce Howatson, Adams Gear Co., Automotive Parts Co., James Ingils & Co., and the Motor Parts Sales Co., all of San Francisco.

Mount Sterling Has Show

MT. STERLING, ILL., Sept. 17—The recently organized association of automotive dealers at Mt. Sterling, Ill., gave its first show Sept. 8, 9 and 10. There was space for the display of forty cars, while there were a number of accessory exhibits. All of the available space was taken and the decorations were an elaborate feature. Dancing and music and also a number of vaudeville numbers were side attractions. The weather was agreeable all three days and the attendance aggregated several thousand. It is believed that the event will prove a valuable stimulant to fall business in that vicinity.

MOLINE REFINANCING PLAN WINS APPROVAL

MOLINE, ILL., Sept. 20—Practically 90 per cent of the interests involved are reported to have given approval to the new financing plan for the Moline Plow Co.

Issuance of \$10,000,000 in 7 per cent debentures; an equal sum in first preferred stock at 7 per cent; and \$7,500,000 in second preferred stock with common stock issue of amount yet to be determined, is basis of the new organization. Common stock now outstanding to the value of \$10,000,000 will be traded in on a 10 for 1 basis and majority of the new common held by the protective committee for banking and commercial creditors for a period of years believed to be sufficient to permit the working out of the difficulties.

Banks, it is said, have agreed to advance \$2,000,000 on notes to provide an immediate working capital.

New second preferred issue will be traded for the \$7,000,000 of 7 per cent first preferred stock now outstanding, par for par and holders of \$1,500,000 of 6 per cent non-cumulative second preferred stock will receive one-third or \$500,000 in new common, it is understood. New preferred stock issues will be entitled to cumulative benefits after two years.

CHANGES IN THE TRADE

J. F. Nolan has been made general manager of the recently formed Philadelphia Roamer Co.

Traffic Motor Truck Corp. has appointed Charles C. Conrad Motor Co., Scranton, Pa., distributors for Traffic Truck in that territory.

Ward-Battle Motor Co., recently organized to distribute Maxwell and Chalmers cars in St. Louis and adjacent territory, has opened permanent headquarters.

D. D. Fontaine, president of the Fairmount Supply & Equipment Co., Philadelphia, has been appointed distributor of the Empress high pressure lubricating gun in the territory.

Lynn L. Whaley, formerly with the International Harvester Co., has become the Toledo distributor for the Acazon trucks, manufactured at Detroit. He will have a direct factory connection.

H. P. Lawson of San Francisco has been named district manager for the Willard Storage Battery Co. The district comprises Oregon, Washington and Idaho, with headquarters in Portland, Ore.

Colyear Motor Sales Co. of San Francisco, with branches along the coast, has been appointed distributor in that territory for Universal joints and cone clutches made by the Hartford Automotive Parts Co.

Eugene B. Smith Co., distributors for Packard and Paige automobiles, will occupy a new building in Greenville, S. C., contract for which has just been let. The building will be modern, fireproof and afford ample facilities.

P. E. Bates, for five years connected with the Mohawk Tire & Rubber Co. of Akron, has joined the staff of the India Tire & Rubber Co. of Akron as district manager. He will look after the company's interests in northern Ohio.

Burwell-Walker Co. of Charlotte, N. C., distributors for Dort cars in both North and South Carolina, will move into its new building Nov. 1. The company has been the distributors for the Dort car in that territory for more than five years.

Ray Battery Sales Corp. of Philadelphia has added the following battery distributors to its list: W. P. Frey, Allentown; Frank H. Thomas, Bethlehem Storage Battery Co., Bethlehem, and R. H. Fidler, Fidler Radio Battery Co., Reading, Pa.

C. G. Williams has been appointed manager of the Cleveland branch of the McGraw Tire & Rubber Co. to succeed D. C. Hathaway, who has been appointed assistant sales manager of the company. Williams has been assistant branch manager.

Keystone American Motor Co., Philadelphia, of which Francis E. Fanning is president and George A. Brower sales and service manager, has been appointed distributor for the American Six. This concern is also distributing the Cunningham car.

F. B. Bradley has been appointed manager of the Binghamton, N. Y., office of D. A. Sanders, automotive equipment and supplies. He was formerly connected with the Martin-Evans Co., Brooklyn, N. Y., and the American Pump & Tank Co., New York.

Thomas Electric Service Co., Marion, Ohio, which has been out of business on account of the war for two years, has opened what is called the Automotive Electric Service Co., and will repair generators and starters, re-wind armatures and recharge batteries.

Lawrence J. Rogers of the Jones-Rogers Motor Co. of Jenkintown, Pa., has resigned from the company and has started a new company which will distribute Studebaker cars in that territory. The new company will go under the name of Rogers Motors.

Whitcomb & Smith of San Francisco have been named distributors for Westinghouse storage batteries for northern California, Nevada and the Hawaiian Islands. The firm has seventy service stations in operation in northern California and Nevada alone, and five of them in San Francisco.

George Neill, formerly motor car dealer and connected with the Los Angeles Locomobile agency for several years, will assume charge of the new San Francisco factory branch of the Leach Blitwell Motor Car Co. of Los Angeles. Neill will take charge of the salesroom on its opening, about Oct. 1.

H. A. Hine Co. will be distributors in California for Reo passenger cars and speed wagons. The company was recently organized by factory officials to carry on the distribution. The Hine company, which will have its headquarters in Oakland, will also take care of distribution in the Orient.

H. L. Corey, advertising manager of the Champion Spark Plug Co., Toledo, after Oct. 1 will be located at Utica, N. Y., to be associated with N. B. M. Wortman in the advertising business. The name of the organization will be Wortman & Corey. George B. Nason will succeed Corey with the Champion Spark Plug Co.

Beam Motor Car Co. of Baltimore, one of the oldest dealers in Maryland, has been appointed Maryland distributor for the Moon car. Harris Motor Co. of Harrisburg, Pa., has been appointed distributor in central Pennsylvania. Baughan Motor Sales Co. of Richmond, Va., has been made distributor for the state of Virginia.

Moreland Motor Truck Co. of San Francisco has separated its manufacturing and selling organization by the formation of a new corporation under the name of Moreland Sales Co., of which Watt L. Moreland, general manager of the Moreland Truck Co., is president. C. J. Kubach, president of the Kubach Construction Co., has been elected president of the Moreland Truck Co., succeeding R. H. Rayfield, who has resigned after 11 years' service.

Hatch Motors Co., Philadelphia, distributor of Hupmobile and Marmon cars, has appointed John A. Midlar manager of retail sales. Midlar continues his work with the company as sales extension manager in charge of advertising. Prior to associating himself with the Hatch company Midlar served as sales promotion manager for the Guy A. Eldley Motor Co., distributor of Paige cars, as well as advertising manager for that concern, and for Grieb & Thomas, distributors of Briscoe and Kissel cars.

Libertyville Has Show

LIBERTYVILLE, ILL., Sept. 20—The \$200,000 automobile show put on by the dealers of Lake County at the annual fair which has just closed here was a big success. Passenger cars, trucks and tractors as well as accessories were included among the exhibits and huge crowds were on hand for the fair and the automobile exhibits. Business outlook is better than at any time this year.

NEW ORLEANS FIGHTS LEGISLATIVE BILLS

Dealers Criticize Introduction of Measures—Tax Levy Plan Starts Action

NEW ORLEANS, LA., Sept. 20—Introduction of several bills by members of the Louisiana Legislature now meeting in special session at Baton Rouge has aroused widespread criticism among the automobile dealers of New Orleans. P. M. Milner, president of the Motor League of Louisiana, in a lengthy letter to the president of the Automobile Dealers Assn., asserted that the proposed measures if enacted into law would treble and possibly quadruple automobile taxes in this State.

Ex-Governor J. Y. Sanders, who sponsored several of the bills condemned by Milner, addressed a general meeting of the Automobile Dealers Assn. at New Orleans, in which he explained his plans for a State highway department and a good roads program. He indicated to the dealers that he would join them in asking the Legislature to modify some of the taxation features of the bills.

Under the new Constitution, the Legislature must levy a minimum tax of \$15 on automobiles and \$25 on trucks. Ginder Abbott of the Abbott Automobile Co. spoke for the dealers at Monday's meeting, stating that the dealers would probably favor a tax of 25 cents for each horsepower and 25 cents for each hundred pounds carrying capacity.

HANCH, VICE-PRESIDENT OF LEXINGTON COMPANY

INDIANAPOLIS, Sept. 20—C. C. Hanch of the Homer McKee Co. of Indianapolis, widely known as vice-president of the National Automobile Chamber of Commerce and chairman of the taxation committee of that organization, has been appointed executive vice-president of the United States Automotive Corp. His headquarters will be in Connersville, the center of the corporation, and Mr. Hanch will have active control of the operating policies of the corporation which includes the Lexington Motor Co., the Ansted Engineering Co., the Ansted Spring & Axle Co., Connersville Foundry Corp., Fayette Painting & Trimming Co. and the Teeter-Hartley Motor Corp.

For twenty years Hanch has occupied a high and prominent position in the automotive industry. Before the war he was associated with the Nordyke & Marmon Co. and the Studebaker Corp. In the period of the war he was chief of the automotive products section of the War Industries Board. Since the war he has served in the Department of Commerce and went to Europe as a commissioner investigating industrial conditions. Several months ago he became connected with the Homer McKee Co. as general business counsel for automotive businesses.

COMING EVENTS

SHOWS

Memphis	Sept. 24-Oct. 1	Automobile Show, State Fair Grounds.
Cincinnati	Oct. 1-8	Fall Automobile Show, Cincinnati Automobile Dealers' Ass'n, Music Hall.
Columbus, O.	Oct. 10, 11, 12, 13	Enclosed Car Show, Columbus Automobile Trade Assn.
Pittsburgh	Oct. 15-22	Fall Show under auspices of Automotive Association.
St. Louis	Oct. 15-22	Automobile Exposition, St. Louis Manufacturers & Dealers Association.
Jersey City	Nov. 14-19	Second Annual Automobile Show, Hudson County Automobile Trade Association, Fourth Regiment Armory.
New York	Nov. 27-Dec. 3	Automobile Salon, Hotel Commodore.
Chicago	January	Automobile Salon, Drake Hotel.
New York	Jan. 7-13	National Automobile Show, under auspices of National Automobile Chamber of Commerce, Grand Central Palace.
Chicago	Jan. 28-Feb. 3, 1922	National Automobile Show, under auspices of National Automobile Chamber of Commerce, Coliseum.

Winnipeg	Feb. 6-11, 1922	Automobile Equipment Show, Western Canada Automotive Association.
Louisville, Ky.	Feb. 20 to 25	Louisville Automobile Show, auspices Louisville Automobile Dealers' Association.
Des Moines, Ia.	Feb. 26	Winter Automobile Show.
Santiago, Cuba	March, 1922	Annual Automobile Show.
Rio de Janeiro, Brazil	Sept., 1922	Automotive Exhibition in connection with Brazilian Centenary.

RACES

Los Angeles	Nov. 24	Speedway Events.
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CONVENTIONS

Chicago	Oct. 12-14	National Implement & Vehicle Association Convention, Congress Hotel.
Chicago	Nov. 14-19	Annual Meeting and Business Exhibit of Automotive Equipment Association.
New York City	Nov. 15-16	Semi-Annual Convention of Factory Service Managers, N. A. C. C., H. R. Cobleigh, Secretary.

The New Car and Truck Description Index

Giving the date and page number on which they appeared

Cars

Ace	Jan. 12, 1921-15
Ambassador	Feb. 2, 1921-11
Bulck Four	Aug. 10, 1921-24
Cadillac Model 61	Sept. 21, 1921-32
Continet (Salon)	Nov. 24, 1920-18
Durant Four	Aug. 10, 1921-30
Duesenberg 8	Nov. 17, 1920-33
Essex (Cabriolet)	Nov. 10, 1920-35
Fergus, 1921	Jan. 12, 1921-23
Forster	Aug. 25, 1920-38
Friend	Jan. 12, 1921-14
Globe Four	Oct. 20, 1920-32
Handley-Knight Four	Nov. 17, 1920-32
Haynes Model 60	Jan. 12, 1921-20
Jackson Four	Jan. 12, 1921-18
Kelsey	Dec. 1, 1920-31
Kenworthy 8	Jan. 12, 1921-13
Kissel Coach Sedan	Jan. 19, 1921-21
Lafayette (Coupe)	Oct. 27, 1920-40
Lexington Series T	Jan. 5, 1921-32
Liberty (Coupe)	Aug. 18, 1920-31
Lincoln	Sept. 8, 1920-34
McFarlan Type 147	Oct. 27, 1920-41
Merced (limousine)	Aug. 18, 1920-37
Mercedes (Post War Model)	Oct. 20, 1920-33
Milburn Electric (38D & 38T)	Jan. 12, 1921-21
Roller	Mar. 30, 1921-21
Nash Four	Nov. 10, 1920-34
National (Sextet Phaeton)	Dec. 15, 1920-36
Navarre	Jan. 12, 1921-13
Northway 6	Jan. 12, 1921-13
Oldsmobile Light 8	Mar. 9, 1921-33
Oldsmobile (Model 43-A)	Dec. 15, 1920-33
Packard Single Six	Sept. 29, 1920-32
Paige Big Six (Six-66)	Sept. 1, 1920-34
Parenti	Jan. 12, 1921-14
Piedmont 4.30	June 29, 1921-30
Pierce-Arrow	Nov. 24, 1920-32
Premocar Special	Feb. 9, 1921-23
Rolls-Royce	Mar. 23, 1921-32
R & V Knight Four	Jan. 12, 1921-16
Scripps-Booth Six	July 13, 1921-32
Sheridan Eight	Oct. 6, 1920-32
Stanwood Six	Sept. 15, 1920-31
Sterling Knight	Feb. 2, 1921-11
Stevens-Duryea	Dec. 1, 1920-30
Wills-Sainte Claire	Mar. 16, 1921-28
Wills Sainte Claire Roadster	July 20, 1921-33

Trucks

Acme (¾ ton)	April 13, 1921-33
Akron Multitruck (1 ton)	Feb. 9, 1921-32
Aries (5 ton)	Jan. 12, 1921-49
Armleder (1 ton)	Nov. 10, 1920-37

Available (1½ ton)	Aug. 4, 1920-32
Avery (1 ton)	Nov. 10, 1920-36
Bessemer (4 ton)	Jan. 12, 1921-30
Bollstrom (4 ton)	Nov. 24, 1920-34
Bridgeport (1½, 2½ & 6 ton)	Jan. 12, 1921-30
Brockway (Highway Express)	Jan. 26, 1921-26
Case (2 ton)	Feb. 16, 1921-16
Clinton (1½, 2½, 3½ & 5 ton)	Jan. 12, 1921-30
Commerce (Mercantile Exp.)	Nov. 10, 1920-37
Cyclone (1½ ton)	Mar. 30, 1921-32
Duplex (2½ ton)	Aug. 18, 1920-31
Federal (5-6 ton)	May 4, 1921-32
Gramm-Bernstein (1 ton)	Nov. 10, 1920-35
G. & J. (2 & 3½ ton)	May 11, 1921-32
G. M. C. (K-15, ¾ ton; K-16, 1 ton; K-41, 3½ ton; K-101, 5 ton)	Mar. 2, 1921-28
Huffman (Models B & C 1 & 2½ tons)	June 29, 1921-30
Inter Harvester (¾ ton)	Feb. 16, 1921-32
Kissel Speed Truck (1 ton)	Mar. 23, 1921-33
Lone Star (1½ ton)	Oct. 27, 1920-30
Lorain (2 ton)	Sept. 1, 1920-30
Mack (double red, axles)	Jan. 5, 1921-33
Moline farm truck (1½ ton)	Nov. 10, 1920-36
Pierce-Arrow (2 ton x 5, 3½ ton, W-2; 5 ton, r-10)	Sept. 8, 1920-36
Rainier (3½ & 5 ton)	Jan. 12, 1921-31
Republic (¾ ton)	July 20, 1921-33
Republic Express, Model 10	Mar. 30, 1921-31
Rumely (1½ ton)	Nov. 10, 1920-36
Service Speed Wagon (1 ton)	Feb. 16, 1921-32
Standard 5-K (5 ton)	Apr. 13, 1921-33
Stoughton (1 ton)	Feb. 23, 1921-33
Stoughton (1½, 2 & 3 ton)	Aug. 25, 1920-33
Transport (¾ ton)	Nov. 2, 1920-31
Ward La France (5 ton)	Jan. 12, 1921-30
Winther	Feb. 2, 1921-11

WILCOX WINS OLDFIELD RACE IN INDIANAPOLIS

INDIANAPOLIS, Sept. 16—Regardless of heavy track Saturday, some fair time was made in the Barney Oldfield sweepstakes at the fair grounds, which event closed the annual State fair. Because of rain, the races were not run off until late in the afternoon. Jules Ellingboe won two out of three heats of a three-cornered match race in the 15 mile event. The summaries are as follows:

First five mile heat, Wilcox first, Ellingboe second, Sarles third. Time 4 minutes 38-2/5 seconds. Second five mile heat, Ellingboe first, Wilcox second and Sarles third. Time 4 minutes and 33 seconds. Third five mile heat, Ellingboe first, Wilcox second and Sarles third. Time 4 minutes, 34-2/5 seconds. Fifteen mile free-for-all, Ellingboe first, Wilcox second. Time, 14 minutes, 3/5 second. Five mile Ford race, Corum first, Koetzla second. Time 5 minutes 16-4/5 seconds.

CAROLINA GETS AFTER NON-PAYERS OF LICENSE

RALEIGH, N. C., Sept. 20—First prosecution of automobile dealers or representatives of manufacturing companies refusing to pay the State license for selling cars within the State has been begun in Pasquotank County. The sheriff of Pasquotank has notified State Treasurer Lact that he has levied on a Packard and a Dort car, belonging to W. R. Lambert, who refused to pay.

Specifications of Current Passenger Car Models

NAME AND MODEL	Engine Make	Cylinders, Bore and Stroke	WB	Tires	2-Pass.	5-Pass.	7-Pass.	Coupe	Sedan	NAME AND MODEL	Engine Make	Cylinders, Bore and Stroke	WB	Tires	2-Pass.	5-Pass.	7-Pass.	Coupe	Sedan
Ace.....G	Guy.	6-3 1/2 x 5	123	32x4	\$2975	\$2975	.....	\$3680	\$3680	Maibohm.....B	Falls.	6-3 1/2 x 4 1/2	116	32x4	11575	11575	11575	\$2395	\$2395
Ace.....H	H.S.	6-3 1/2 x 5	123	32x4	2975	2975	.....	3680	3680	Marmont.....34	Ow.	6-3 1/2 x 5 1/2	136	32x4 1/2	4185	13985	3985	4875	5275
Ace.....L	H.S.	4-3 1/2 x 5	116	32x4	2260	2260	.....	.....	.....	Maxwell.....25	Ow.	4-3 1/2 x 4 1/2	109	30x3 1/2	845	845	1445	1545	1545
Allen.....Series 43	Ow.	4-3 1/2 x 5	110	32x4	11385	1385	.....	2195	2195	McFarlan.....1921	Ow.	6-4 1/2 x 6	140	33x5	6300	6300	6300	7500	7500
Ambassador.....R	Cont.	6-3 1/2 x 5 1/2	136	33x5	.....	14500	14500	6500	6500	Mercer.....Series 5	Ow.	4-3 1/2 x 6 1/2	132	32x4 1/2	3950	3950	3950	5150	5650
American.....C	H.S.	6-3 1/2 x 5	127	32x4	2195	2195	12350	3150	3150	Merit.....Dues.	Cont.	6-3 1/2 x 4 1/2	119	32x4	2245	2245	.....	.....	.....
Anderson.....Series 40	Cont.	6-3 1/2 x 4 1/2	120	32x4	2195	1795	1845	2795	2795	Motor.....R & RR	Cont.	4-4 1/2 x 6	129	32x4 1/2	5500	5500	.....	.....	.....
Apperson.....8-21-S	Ow.	8-3 1/2 x 5	130	34x4 1/2	.....	3000	3250	4500	4500	Motr.....M6	Rut.	6-3 1/2 x 5	120	32x4	1995	1995	.....	2795	2895
Apperson.....Anniversary	Ow.	8-3 1/2 x 5	130	34x4 1/2	.....	3500	3750	.....	.....	Mitchell.....F-40	Ow.	6-3 1/2 x 5	120	32x4	11490	1490	.....	.....	.....
Auburn.....6-51	Cont.	6-3 1/2 x 4 1/2	121	32x4	1670	1695	1760	2475	2495	Mitchell.....F-42	Ow.	6-3 1/2 x 5	127	33x4	.....	.....	1795	.....	.....
Beggs.....20T	Cont.	6-3 1/2 x 4 1/2	120	33x4	1775	1775	.....	2675	2775	Mitchell.....F-45	Ow.	6-3 1/2 x 5	120	33x4	.....	.....	.....	2290	2440
Bell.....4-32	H.S.	4-3 1/2 x 5	114	31x4	.....	1495	.....	.....	.....	Moller.....S-9 & 10	Ow.	4-2 1/2 x 4	100	27x3 1/2	2000	1295	.....	.....	.....
Bell.....6-50	H.S.	4-3 1/2 x 5	124	32x4	.....	1695	.....	.....	.....	Monroe.....S-11 & 12	Ow.	4-3 1/2 x 4 1/2	115	33x4	1285	1295	.....	2075	2175
Biddle.....B1	Buda.	4-3 1/2 x 5 1/2	121	32x4	3475	3475	11245	2295	1795	Moore.....6-48	Cont.	6-3 1/2 x 4 1/2	122	32x4	1785	1785	2485	2785	2785
Birch Super-Four	H.S.	4-3 1/2 x 5	117	33x4	1195	1195	.....	.....	.....	Moore.....6-48	Cont.	6-3 1/2 x 4 1/2	122	32x4 1/2	1285	1285	2485	2785	2785
Birch Light Four	LeR.	4-3 1/2 x 5	108	30x3 1/2	1045	1045	.....	.....	.....	Murray-Mac Str.	Ow.	6-3 1/2 x 5 1/2	128	34x4 1/2	4250	4250	4250	.....	.....
Birch Light Six	H.S.	6-3 1/2 x 5	117	33x4	1395	1395	11445	.....	1995	Nash.....681-7	Ow.	6-3 1/2 x 5	121	33x4	1525	1545	11695	2395	2695
Bour-Davis.....21S	Cont.	6-3 1/2 x 5 1/2	126	33x4 1/2	2385	2385	.....	.....	.....	Nash.....682	Ow.	6-3 1/2 x 5	127	34x4 1/2	.....	1695	.....	.....	.....
Brewster.....91	Ow.	4-4 1/2 x 5	125	32x4 1/2	17000	7000	.....	10500	10500	Nash Four.....41-4	Ow.	4-3 1/2 x 5	112	32x3 1/2	1175	1195	1735	1935	1935
Briscoe.....4-34	Ow.	4-3 1/2 x 5	109	31x4	1085	1085	.....	1685	1685	National Sextet.....BB	Ow.	6-3 1/2 x 5 1/2	130	32x4 1/2	2990	1990	2990	3990	3990
Brook.....S-21 A	Ow.	2-3 1/2 x 3 1/2	90	28x3	395	.....	.....	.....	.....	Neison.....D	Ow.	4-3 1/2 x 4 1/2	104	32x4	1750	.....	.....	.....	.....
Buick.....1922-31-35-37	Ow.	4-3 1/2 x 5	109	31x4	935	975	.....	1475	1650	Nema.....IC	Cont.	6-3 1/2 x 4 1/2	128	32x4 1/2	2800	2850	3200	3700	3700
Buick.....1922-44-5-6-7	Ow.	6-3 1/2 x 4 1/2	118	33-4	1495	1525	.....	2135	2435	Northway.....430-KS	Lyc.	4-3 1/2 x 5	116	32x3 1/2	.....	1035	.....	.....	.....
Buick.....1922-48-9-50	Ow.	6-3 1/2 x 4 1/2	124	34x4 1/2	.....	.....	1735	2325	2635	Oakland.....34-C	Ow.	6-2 1/2 x 4 1/2	115	32x4	1095	1195	11265	1625	1725
Bush.....E.C.4	Lyc.	4-3 1/2 x 5	116	33x4	.....	1195	.....	.....	.....	Ogden.....6-60	Ow.	6-3 1/2 x 5 1/2	134	33x5	3850	3750	3900	5000	5400
Bush.....E.C.6	Rut.	4-3 1/2 x 5	116	33x4	.....	1345	.....	1750	1850	Oldsmobile.....43-A	Ow.	4-3 1/2 x 5 1/2	115	32x4	1145	1145	.....	1645	1845
Cadillac.....59	Ow.	8-3 1/2 x 5 1/2	132	34x4 1/2	3790	3790	3940	.....	5190	Oldsmobile.....37-A	Ow.	6-2 1/2 x 4 1/2	112	32x4	11450	1450	.....	2145	2145
Carroll.....C	Cont.	6-3 1/2 x 5	128	32x4 1/2	3185	3185	.....	.....	.....	Oldsmobile.....46	Ow.	8-2 1/2 x 4 1/2	122	33x4 1/2	11735	1735	.....	2635	2635
Case.....V	Cont.	6-3 1/2 x 5	126	34x4 1/2	.....	2250	2250	2900	3285	Oldsmobile.....47	Ow.	8-2 1/2 x 4 1/2	115	32x4	11625	2185	2425	2425	2425
Chalmers.....6-38	Ow.	6-3 1/2 x 4 1/2	117	32x4	1495	1545	.....	2295	2445	Overland.....4	Ow.	4-3 1/2 x 4	100	30x3 1/2	595	595	.....	895	895
Chalmers.....6-38	Ow.	6-3 1/2 x 4 1/2	122	33x4 1/2	.....	.....	1795	.....	.....	Packard.....Single-Six	Ow.	6-3 1/2 x 4 1/2	116	32x4 1/2	2975	2975	3650	3975	3975
Champion.....Tourist	Lyc.	4-3 1/2 x 5	113	32x3 1/2	.....	1095	.....	.....	.....	Packard.....Twin Six	Ow.	12-3 x 5	136	36x5	4850	4850	6800	6800	6800
Champion.....Special	H.S.	4-3 1/2 x 5	118	32x4	11395	1395	1785	2785	2885	Paige.....6-42	Ow.	6-3 1/2 x 5	119	32x4	1635	1635	2450	2570	2570
Chandler.....Six	Ow.	6-3 1/2 x 5	123	33x4	1785	1785	.....	875	875	Paige.....6-66	Cont.	6-3 1/2 x 5	131	33x4 1/2	12975	13295	2875	3755	3830
Chevrolet.....490	Ow.	4-3 1/2 x 4	102	30x3 1/2	525	525	.....	.....	.....	Pan American E&F-4-55	H.S.	6-3 1/2 x 5	121	33x4	2000	2000	2100	.....	.....
Chevrolet.....FB	Ow.	4-3 1/2 x 4 1/2	110	32x4	975	975	.....	1575	1575	Parenti.....1921	Ow.	8-2 1/2 x 4 1/2	125	32x4	2000	2000	.....	3000	3000
Cleveland.....40	Ow.	6-3 1/2 x 5	112	32x4	1295	1295	.....	2195	2295	Patterson.....650	Cont.	6-3 1/2 x 4 1/2	120	32x4	.....	1595	1625	2895	2895
Climber Four	H.S.	4-3 1/2 x 5	115	33x4	1450	1385	.....	.....	.....	Peterson.....56-S-7	Ow.	8-3 1/2 x 5	125	34x4 1/2	.....	2880	2880	3500	3790
Climber Six	S	6-3 1/2 x 5	125 1/2	32x4 1/2	2250	2250	.....	3695	3995	Piedmont.....4-38	Lyc.	4-3 1/2 x 5	116	32x3 1/2	.....	970	.....	.....	.....
Cole.....870	Nort.	8-3 1/2 x 4 1/2	127	33x5	2550	2605	2795	3695	3995	Piedmont.....6-40	Cont.	6-3 1/2 x 4 1/2	122	32x4	.....	1255	.....	.....	.....
Columbia Challenger	Rut.	6-3 1/2 x 5	115	32x4	.....	1195	.....	1195	1995	Pierce-Arrow.....6-45	Testor	6-4 1/2 x 5	138	33x5	7000	6500	6500	8000	8500
Columbia.....D-C&S	Cont.	6-3 1/2 x 4 1/2	115	32x4	1475	1475	11475	2295	2350	Pieror.....4-4	Ow.	4-4 1/2 x 6 1/2	142	35x5	6750	Chassi Price	.....	.....	.....
Comet.....C-53	Cont.	6-3 1/2 x 5 1/2	125	33x4 1/2	.....	2350	2450	3650	3650	Premier.....6-D	Ow.	6-3 1/2 x 5 1/2	126 1/2	33x5	3790	3690	3890	4690	5190
Commonwealth.....44	H.S.	4-3 1/2 x 5	117	32x4	.....	1395	.....	2465	2465	Premecar.....6-40 A	Falls.	6-3 1/2 x 4 1/2	117	33x4	1295	1295	.....	.....	.....
Crawford.....21-4-10	Cont.	4-3 1/2 x 5 1/2	122 1/2	32x4	3000	3000	3000	4500	4500	Raleigh.....A-6-60	H.S.	6-3 1/2 x 5	122	32x4 1/2	2250	2250	3100	3200	3200
Crew-Elkhart.....L53-65	Lyc.	4-3 1/2 x 5	117	32x3 1/2	11295	1295	.....	.....	.....	R & V Knight.....R	Ow.	4-3 1/2 x 5	116	32x4	2150	2150	2850	2950	2950
Crew-Elkhart.....S63-65	H.S.	4-3 1/2 x 5	117	33x4	11545	1545	.....	2395	2395	R & V Knight.....J	Ow.	6-3 1/2 x 5 1/2	127	32x4 1/2	3350	3350	3350	4000	4200
Daniels.....D-19	Ow.	8-3 1/2 x 5 1/2	132	34x4 1/2	5350	5350	6250	6950	6950	Reo Series A.....T-6	Ow.	6-3 1/2 x 5	120	33x4	1650	1650	2700	2750	2750
Davis.....61-67	Cont.	6-3 1/2 x 4 1/2	120	32x4	11995	1895	11995	2795	2795	Reo.....C	Dues.	4-4 1/2 x 6	131	32x4 1/2	4850	4650	14650	6500	6500
Dispatch.....Wisc.	4-3 1/2 x 5	120	32x4	1250	1350	1525	1575	.....	.....	Roamer.....6-54-E	Cont.	6-3 1/2 x 5 1/2	128	32x4 1/2	2750	2650	2750	3850	3950
Dirge Flyer.....H-S-70	H.S.	4-3 1/2 x 5	112	32x4	1445	1445	1945	2295	2345	Roamer.....4-75-E	Dues.	4-4 1/2 x 6	128	32x4 1/2	3850	.....	.....	.....	.....
Dodge Brothers.....6-80	Ow.	6-4 x 5	132	33x5	.....	1785	1785	.....	.....	Radio-Royce.....Ow.	6-4 1/2 x 4 1/2	143 1/2	33x5	U. S. Chassi Price	11750	.....	.....	.....	.....
Dorris.....17-12	D-Ly.	4-3 1/2 x 5	108	31x4	985	985	1535	.....	.....	Remor.....Cont.	6-3 1/2 x 4 1/2	120	33x4	2000	2100	2450	2750	2750	
Dort.....17-12	D-Ly.	4-3 1/2 x 5	108	31x4	985	985	1535	.....	.....	Saxon.....125	Ow.	4-3 1/2 x 5	112	32x4	1545	1495	.....	2295	2295
Driggs.....A	Ow.	4-2 1/2 x 4 1/2	104	30x3 1/2	1275	1275	.....	.....	.....	Sayers Six.....DP	Cont.	6-3 1/2 x 4 1/2	118	33x4	1945	1945	.....	2995	2995
Du Pont.....A-22	Cont.	4-3 1/2 x 4 1/2	109	31x4	.....	890	.....	1365	1365	Scripps-Booth.....B-30-42	Nort.	6-2 1/2 x 4 1/2	118	32x4	1275	1295	.....	1950	2100
Elcar.....K-4	Lyc.	4-3 1/2 x 5	117	33x4	1195	1195	.....	2395	2495	Scripps-Booth.....F-43-46	Cont.	6-3 1/2 x 4 1/2	118	32x4	1470	1490	.....	2350	2375
Elcar.....7-R	Cont.	6-3 1/2 x 4 1/2	117	33x4	11595	1595	11195	2395	2495	Seaton.....L & O	Leit.	4-3 1/2 x 4 1/2	108	30x3 1/2	1045	1045	.....	.....	.....
Elgin.....K-1	Falls.	6-3 1/2 x 4 1/2	118	33x4	1595	1495	11595	2395	2395	Seaton.....Six	Cont.	6-3 1/2 x 5 1/2	122 1/2	33x4 1/2	1485	1485	2100	2250	2250
Essex.....Ow.	4-3 1/2 x 5	108 1/2	32x4	1375	1375	.....	1880	2230	2230	Seaton.....Six	Cont.	6-3 1/2 x 5 1/2	122 1/2	33x5	2550	2550	2550	3250	3350
Fergus.....S-5-21	Ow.	6-3 1/2 x 5	126	33x4 1/2	.....	Chassi Price	8500	.....	.....	Skelton.....35	Lyc.	4-3 1/2 x 5	112	32x3 1/2	995	995	.....	.....	.....
Ferris.....C-28	Cont.	6-3 1/2 x 5 1/2	130	32x4 1/2	2695	.....	2595	3695	3695	Southern Six.....668-2	H.S.	6-3 1/2 x 5	127	32x4 1/2	2375	2375	2395	.....	.....
Ford.....T	Ow.	4-3 1/2 x 4	100	30x															

Specifications of Current Motor Truck Models

NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive
				Front	Rear						Front	Rear						Front	Rear	
Acason	1 1/2	\$1650	3 1/2 x 5	34x5	34x5	W	Corbett, A	3 1/2	\$4100	4 1/2 x 5 1/2	36x5	36x10	W	Gary, J	2 1/2	\$3150	4 1/2 x 5 1/2	36x4	36x7	W
Acason, R	1 1/2	2280	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Corbett, AA	5	5000	4 1/2 x 5 1/2	36x6	40x6d	W	Gary, K	3 1/2	4050	4 1/2 x 5 1/2	36x5	40x5d	W
Acason, RB	1 1/2	2485	3 1/2 x 5 1/2	36x3 1/2	36x6	W	Cyclone A	1 1/2	2685	3 1/2 x 5	34x5 1/2	36x10 1/2	W	Gary, M	5	5150	5 x 10 1/2	36x6	40x6d	W
Acason, H	2 1/2	3295	4 1/2 x 5 1/2	36x4	36x8	W								Gorain, M	1 1/2	3100	4 x 5 1/2	36x3 1/2	36x7	W
Acason, L	2 1/2	4295	4 1/2 x 5 1/2	36x5	36x10	W	Dart, S	1 1/2	...	3 1/2 x 5 1/2	34x3 1/2	34x6	W	Gorain, K	2 1/2	3500	4 1/2 x 5 1/2	36x4	36x8	W
Acason, M	5	5250	5 x 10 1/2	36x6	40x12	W	Dart, M	2 1/2	...	3 1/2 x 5 1/2	36x4	36x7	W	Gorain, L	3 1/2	4500	4 1/2 x 5 1/2	36x5	40x12	W
Acc, C	1 1/2	2295	3 1/2 x 5 1/2	34x3 1/2	34x5	W	Dart, W	3 1/2	...	3 1/2 x 5 1/2	36x5	36x10	W	Giant, 15-A	1 1/2	2250	3 1/2 x 5	34x3 1/2	34x5	W
Acc, A	2 1/2	2795	4 1/2 x 5 1/2	36x4	36x7	W	Day-Elder, A	1	2100	3 1/2 x 5	34x3 1/2	34x4	W	Giant, 16	2	3050	4 1/2 x 5 1/2	36x4	36x7	W
Acco, G	1 1/2	...	3 1/2 x 5	35x5 1/2	35x5 1/2	W	Day-Elder, B	1 1/2	2300	3 1/2 x 5	34x3 1/2	34x5	W	Giant, 17	3 1/2	4150	4 1/2 x 5 1/2	36x5	36x5d	W
Acco, B	1	...	3 1/2 x 5	34x3 1/2	34x5	W	Day-Elder, C	2	2750	4 1/2 x 5 1/2	36x4	36x7	W	Globe D-20	3 1/2	1495	3 1/2 x 5	33x4 1/2	33x4 1/2	B
Acco, F	1 1/2	...	3 1/2 x 5	34x3 1/2	34x5	W	Day-Elder, D	2 1/2	3025	4 1/2 x 5 1/2	36x4	36x7	W	Globe	1	1495	3 1/2 x 5	33x5	33x5	B
Acco, A	2	...	4 1/2 x 5 1/2	36x4	36x7	W	Day-Elder, E	3 1/2	3750	4 1/2 x 5 1/2	36x5	36x5d	W	Golden West, GH	3	5000	4 1/2 x 5	36x7	36x7	W
Acco, AC	2 1/2	...	4 1/2 x 5 1/2	36x4	36x7	W	Day-Elder, F	5	4250	4 1/2 x 5	36x5	40x6d	W	Golden West, G	3 1/2	4500	4 1/2 x 5 1/2	36x6	36x6	W
Acco, C	3 1/2	...	4 1/2 x 5 1/2	36x5	40x10	W	Dearborn, E	1	1700	3 1/2 x 5	35x5 1/2	35x5 1/2	W	Golden West, H	3 1/2-4	5000	4 1/2 x 5	36x6	36x6	W
Acco, E	5	...	4 1/2 x 5	36x6	40x12	W	Dearborn, FX	1 1/2	2300	3 1/2 x 5 1/2	34x4	34x5	W	Golden West, I	4	5500	4 1/2 x 5	36x6	36x6	W
Ahr's Multi-Trk 20	1	1995	4 x 10 1/2	34x5	34x5	B	Dearborn, G	1 1/2	2180	3 1/2 x 5 1/2	34x4	34x5	W	Golden West, K	7	6000	5 1/2 x 6	36x6	36x6	W
American, 25	2 1/2	3350	4 x 10 1/2	36x4	36x4d	W	Dearborn, H	2	2590	3 1/2 x 5 1/2	35x5 1/2	34x7 1/2	W	Golden West, HA	7	6000	5 1/2 x 6	36x6	36x10	W
American, 40	4	4275	4 1/2 x 6	36x5	36x5d	W	Defiance, G	1	1995	3 1/2 x 5	35x5 1/2	35x5 1/2	W	Graham Bros, A	1 1/2	2495	3 1/2 x 5	35x5 1/2	35x5 1/2	I
Apez, G	1	1450	3 1/2 x 5	33x5 1/2	33x5 1/2	W	Defiance, D	1 1/2	2095	3 1/2 x 5	35x5 1/2	36x8 1/2	W	Gramm-Born, 10	1	1495	3 1/2 x 5	35x5 1/2	35x5 1/2	B
Apez, D	1 1/2	1915	3 1/2 x 5 1/2	34x3 1/2	34x4	W	Defiance, E	2	2200	3 1/2 x 5	35x5 1/2	35x7 1/2	W	Gramm-Born, 15	1 1/2	2050	3 1/2 x 5	36x3 1/2	36x5	I
Apez, E	2 1/2	2695	4 1/2 x 5 1/2	36x4	36x7	W	Dekalb, E2 1/2	2	2785	4 1/2 x 5 1/2	36x4	36x8	W	Gramm-Born, 65	1 1/2	2725	3 1/2 x 5	36x3 1/2	36x5	W
Apez, F	3 1/2	3975	4 1/2 x 6	36x5	36x10	W	Dekalb, E2	2 1/2	2250	4 1/2 x 5 1/2	34x3 1/2	36x5	W	Gramm-Born, 20	2	3175	4 1/2 x 5 1/2	36x4	36x7	W
Armstrong, 20	1	...	3 1/2 x 5 1/2	34x3 1/2	34x5 1/2	W	DeMartini 1 1/2	1 1/2	2600	3 1/2 x 5	34x3 1/2	34x6	W	Gramm-Born, 25	2 1/2	3575	4 1/2 x 5 1/2	36x4	36x4d	W
Armstrong, HW	2 1/2	...	4 1/2 x 5 1/2	36x4	36x7 1/2	W	DeMartini 2	2	3200	4 x 5 1/2	36x3 1/2	36x7	W	Gramm-Born, 35	3 1/2	4375	4 1/2 x 5 1/2	36x5	40x5d	W
Armstrong, KW	3 1/2	...	4 1/2 x 5 1/2	36x4	36x7 1/2	W	DeMartini 3	3	4250	4 1/2 x 5 1/2	36x4	36x10	W	Gramm-Born, 50	5	5275	4 1/2 x 5	36x6	40x6d	W
Atco, B1	1 1/2	...	3 1/2 x 5 1/2	34x5 1/2	36x8 1/2	W	DeMartini 4	4	4800	4 1/2 x 5	36x5	36x12	W							
Atco, A	2 1/2	...	4 1/2 x 5 1/2	36x4	36x8 1/2	W	Denby, 31	1 1/2	1625	3 1/2 x 5	35x5	35x5	B	Hahn, J4	1	...	3 1/2 x 5	34x5	34x5	W
Atlas, MLD	1	1550	3 1/2 x 5	32x4 1/2	32x4 1/2	W	Denby, 33	1 1/2	2300	3 1/2 x 5	35x5 1/2	36x7 1/2	W	Hahn, CD	1 1/2	...	4 1/2 x 5 1/2	36x3 1/2	36x6	W
Atterbury, 20R	1 1/2	2715	3 1/2 x 5	34x3 1/2	34x5	W	Denby, 34	2	2600	3 1/2 x 5	36x3 1/2	36x8	W	Hahn, EE	2 1/2	...	4 1/2 x 5 1/2	36x4	36x8	W
Atterbury, 7CX	2 1/2	3375	4 1/2 x 5 1/2	36x4	36x4d	W	Denby, 25	3	3300	4 1/2 x 5 1/2	36x4	36x7	W	Hahn, F	3 1/2	...	4 1/2 x 5 1/2	36x5	36x10	W
Atterbury, 7D	3 1/2	4175	4 1/2 x 5 1/2	36x5	40x5d	W	Denby, 27	4	4200	4 1/2 x 5 1/2	36x5	36x5d	W	Hahn, EF	5	...	4 1/2 x 5	36x6	40x12	W
Atterbury, 8E	5	5575	4 1/2 x 6	36x5	40x6d	W	Denby, 210	5	4850	4 1/2 x 5 1/2	36x6	40x6d	W	Hal Fur, E	1	2350	4 x 5	35x5 1/2	35x5 1/2	W
Autocar, 21UF	1 1/2-2	2300	4 1/2 x 4 1/2	34x4	34x5	D	Dependable, A	1 1/2	1650	3 1/2 x 5	34x5	36x6	W	Hal Fur, B	2 1/2	3250	4 1/2 x 5 1/2	35x5	38x7	W
Autocar, 21UG	1 1/2-2	2400	4 1/2 x 4 1/2	34x4	34x5	D	Dependable, C	1 1/2	2350	3 1/2 x 5 1/2	34x3 1/2	34x5	W	Hal Fur, F	3 1/2	4250	4 1/2 x 5 1/2	36x6 1/2	40x10 1/2	W
Autocar, 24Y	...	4350	4 1/2 x 5 1/2	34x6	36x12	D	Dependable, D	2	2650	4 x 5 1/2	34x5	36x6	W	Hall	1 1/2	3100	3 1/2 x 5	34x5 1/2	34x7 1/2	W
Autocar, 26-B	...	4500	4 1/2 x 5 1/2	34x6	36x12	D	Dependable, E	2 1/2	2950	4 1/2 x 5 1/2	36x4	36x7	W	Hall	2 1/2	3275	4 1/2 x 5 1/2	36x4	36x6	W
Available, H1 1/2	1 1/2	2475	4 x 5 1/2	36x3 1/2	36x5	W	Dependable, G	3 1/2	3550	4 1/2 x 5	36x6	36x7	W	Hall	3 1/2	4100	4 1/2 x 5 1/2	36x5	36x5d	W
Available, H2	2	2775	4 x 5 1/2	36x3 1/2	36x5	W	Diamond T, O	1	2500	3 1/2 x 5 1/2	34x5 1/2	36x10 1/2	W	Hall	5	5100	4 1/2 x 5 1/2	36x6	40x6d	W
Available, H2 1/2	2 1/2	3475	4 x 5 1/2	36x4	36x8	W	Diamond T, FS	1 1/2	2690	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Hall	7	5100	4 1/2 x 5 1/2	36x6	40x6d	W
Available, H3 1/2	3 1/2	4475	4 1/2 x 5 1/2	36x5	40x5d	W	Diamond T, T	1 1/2	2650	3 1/2 x 5 1/2	36x3 1/2	36x6	W	Harvey, WEA	1 1/2	2550	4 1/2 x 5 1/2	34x3 1/2	34x5	W
Available, H5	5	5375	4 1/2 x 5 1/2	36x5	40x5d	W	Diamond T, U	2	3285	4 x 5 1/2	36x4	36x7	W	Harvey	2	2950	4 1/2 x 5 1/2	34x4	34x7	W
Available, H7	7	6000	5 x 6	36x6	40x14	B	Diamond T, K	3 1/2	4675	4 1/2 x 5 1/2	36x5	36x5d	W	Harvey, WFA	2 1/2	3300	4 1/2 x 5 1/2	36x4	36x7	W
Avery	1	...	3 x 4	34x5 1/2	34x5 1/2	I	Diamond T, EL	5	5400	4 1/2 x 5 1/2	36x6	40x6d	W	Harvey, WHA	3 1/2	3950	4 1/2 x 5	36x5	36x5d	W
							Diamond T, S	5	5650	4 1/2 x 5	36x6	40x6d	W	Harvey, WKA	5	4500	4 1/2 x 5	36x6	40x6d	W
Beck, A. Jr.	1	1950	3 1/2 x 5	34x3 1/2	34x4	I	Diehl, A	1	...	3 1/2 x 5	34x3 1/2	35x5	W	Hawkeye, K	1 1/2	1850	3 1/2 x 5	34x2 1/2	34x5	I
Beck, C	2	2550	4 1/2 x 5 1/2	36x4	36x6	W	Diehl, B	1 1/2	...	3 1/2 x 5	36x6	36x6	W	Hawkeye, M	2	2650	4 1/2 x 5 1/2	36x4	36x8	W
Beck, M	1 1/2	1495	3 1/2 x 5 1/2	35x5	35x5 1/2	I	Dispatch, F	1	1350	3 1/2 x 5	34x4 1/2	34x4 1/2	W	Hawkeye, N	3 1/2	3700	4 1/2 x 5			

Specifications of Current Motor Truck Models—Continued

NAME AND MODEL	Tons Capacity	Chassis Price	Base and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Base and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Base and Stroke	TIRES		Final Drive
				Front	Rear						Front	Rear						Front	Rear	
Kelly-S, K-45	4	\$4550	41x5 1/2	36x5	40x6d	C	Opden, E	2 1/2	\$3250	41x5 1/2	36x4	36x7	W	Signal, NF	1	2475	41x5 1/2	34x5 1/2	36x6 1/2	W
Kelly-S, K-50	5	4900	41x5 1/2	36x6	40x7d	C	Old Hickory, W	1	2175	31x5 1/2	36x3 1/2	36x4	W	Signal, H	1 1/2	2925	41x5 1/2	34x4	36x6	W
Kelly-S, K-55	6	5100	41x5 1/2	36x6	40x7d	C	Old Reliable, A	1 1/2	2350	4 x 25	34x4	36x6	W	Signal, J	2 1/2	3275	41x5 1/2	34x4	36x8	W
Keystone, 40	2	2450	31x5 1/2	34x5 1/2	38x7 1/2	I	Old Reliable, B	2 1/2	3500	41x6	34x4	36x4d	W	Signal, M	2 1/2	4275	41x5 1/2	36x5	40x5d	W
Kimball, AB	2	3675	4 x 20	36x4	36x7	W	Old Reliable, C	3 1/2	4250	41x6	36x5	36x5d	W	Signal, R	5	5300	41x6	36x6	40x6d	W
Kimball, AC	2 1/2	3975	41x6	36x4	36x8	W	Old Reliable, D	5	5250	41x6	36x6	40x6d	W	Southern, 10	1	2090	31x5 1/2	34x3 1/2	34x4	W
Kimball, AK	3	4500	41x6	36x4	36x10	W	Old Reliable, E	7	6000	41x6 1/2	36x6	40x7d	C	Southern, 15	1 1/2	2590	31x5 1/2	34x3 1/2	34x4	W
Kimball, AE	4	5000	41x6	36x6	40x12	W	Olympic, A	1	1095	31x5 1/2	35x5 1/2	35x5 1/2	I	Southern, 20	2	2990	41x5 1/2	36x6 1/2	40x8	W
Kimball, AF	5	5975	5 x 20	36x6	40x7d	W	Olympic, A	2 1/2	3500	41x5 1/2	36x4	36x7	W	Standard, 1-K	1-1 1/2	1950	31x5 1/2	34x3 1/2	34x5	W
Kiesel, Express	1	1985††	31x5 1/2	34x5 1/2	34x5 1/2	W	Onida, A-9	1 1/2	3350	31x5 1/2	36x3 1/2	36x5	W	Standard, 76	3 1/2-4	3100	41x5 1/2	36x4	36x7	W
Kiesel, Utility	1 1/2	2775	31x5 1/2	36x3 1/2	36x5	W	Onida, B-9	1 1/2	2915	4 x 25 1/2	36x4	36x7	W	Standard, 66	3 1/2-4	4000	41x5 1/2	36x5	36x10	W
Kiesel, Freight	2 1/2	3475	41x5 1/2	36x4	36x7	W	Onida, C-9	2 1/2	3390	4 x 25 1/2	36x4	36x7	W	Standard, 5-K	6-7	5250	41x6	36x6	40x12	W
Kiesel, H. D.	4	4475	41x5 1/2	36x5	36x5d	W	Onida, D-9	3 1/2	4345	41x5 1/2	36x5	36x10	W	Stirling, 1 1/2	1 1/2	3200	4 x 25 1/2	36x3 1/2	36x5	W
Kleiber, AA	1	2600	41x5 1/2	36x3 1/2	34x5	W	Onida, E-9	5	5480	41x5 1/2	36x6	40x12	W	Stirling, 2	2	3500	4 x 25 1/2	36x4	36x6	W
Kleiber, A	1 1/2	3100	41x5 1/2	36x3 1/2	36x6	W	Oshkosh, A	2	3750	31x5 1/2	36x6 1/2	36x8 1/2	4	Stirling, 2 1/2	2 1/2	3650	41x5 1/2	36x4	36x4d	W
Kleiber, BB	2	3600	41x5 1/2	36x4	36x7	W	Oshkosh, AA	2	3850	31x5 1/2	36x6 1/2	36x8 1/2	4	Stirling, 3 1/2	3 1/2	4650	41x6 1/2	36x5	40x5d	W
Kleiber, B	2 1/2	3950	41x5 1/2	36x5	36x8	W	Oshkosh, B	2 1/2	4150	4 x 25 1/2	38x7 1/2	38x7 1/2	4	Stirling, 5-W	5	5500	5 x 20 1/2	36x6	40x6d	W
Kleiber, C	3	4600	41x5 1/2	36x5	36x5d	W	Oshkosh, BB	2 1/2	4300	4 x 25 1/2	38x7 1/2	38x7 1/2	4	Stirling, 5-C	5	6000	5 x 20 1/2	36x6	40x6d	C
Kleiber, D	5	5300	5 x 20 1/2	36x6	40x12	W	Packard, EC	...	3500	41x5 1/2	36x4	36x7	W	Stirling, 7	7 1/2	6500	5 x 20 1/2	36x6	40x7d	W
Koehler, D	1 1/2	1885	31x5 1/2	34x3 1/2	34x5	W	Packard, ED	...	4100	41x5 1/2	36x5	36x5d	W	Stewart, 14	1 1/2	1395	31x5 1/2	32x4 1/2	32x4 1/2	I
Koehler, M	2 1/2	2875	4 x 25 1/2	36x4	36x7	W	Packard, EF	...	4500	5 x 25 1/2	36x6 1/2	40x6 1/2	W	Stewart, 15	1	1875	31x5 1/2	35x5 1/2	35x5 1/2	I
Koehler, MCS	2 1/2	2975	4 x 25 1/2	36x4	36x7	W	Packard, EX	...	4000	41x5 1/2	36x6 1/2	40x8 1/2	W	Stewart, 9	1 1/2	2200	31x5 1/2	34x3 1/2	34x5	I
Koehler, F	3 1/2	3955	41x5 1/2	36x5	36x10	W	Paige, 52-19	1 1/2	2890	4 x 25 1/2	34x3 1/2	34x5	W	Stewart, 7	2	2800	41x5 1/2	34x4	34x7	I
Koehler, MT, Trac	3 1/2	2975	4 x 25 1/2	36x4	36x7	W	Paige, 54-20	2 1/2	3400	41x5 1/2	34x4	34x8	W	Stewart, 7-X	2 1/2	2950	41x5 1/2	34x4	34x7	I
L.M.C., 2-20	2 1/2	2540	41x5 1/2	36x4	36x4d	I	Paige, 51-18	2 1/2	4283	41x5 1/2	36x5	36x5d	W	Stewart, 10	2 1/2	3850	41x5 1/2	36x5	36x5d	I
Lange, B	2 1/2	3350	41x5 1/2	36x4	36x6	C	Parker, F20	2	3500	4 x 20	34x4	36x4d	W	Stewart, 10-X	2 1/2	3850	41x5 1/2	36x5	36x5d	I
Larrabee, XZ	1 1/2	1925	31x5 1/2	34x5 1/2	34x5 1/2	B	Parker, J20	3 1/2	4400	41x6	36x5	40x5d	W	Stoughton, A	1	1995	31x5 1/2	34x4 1/2	35x5 1/2	W
Larrabee, U	1 1/2	2400	31x5 1/2	34x3 1/2	34x5	W	Parker, M20	5	5500	41x6	36x6	40x6d	W	Stoughton, B	1 1/2	2350	31x5 1/2	36x3 1/2	36x5	W
Larrabee, SK	2 1/2	3200	41x5 1/2	36x4	36x7	W	Patriot, Revere	1 1/2	1735	31x5 1/2	35x5 1/2	35x5 1/2	W	Stoughton, C	3 1/2	1240	31x5 1/2	31x4 1/2	31x4 1/2	W
Larrabee, FL	3 1/2	4000	41x5 1/2	36x5	36x5d	W	Patriot, Lincoln	1 1/2	2450	4 x 25 1/2	34x3 1/2	34x5	W	Stoughton, D	2	2800	4 x 25 1/2	36x4	36x7	W
Larrabee, FW	5	4800	41x6	36x6	40x6d	W	Patriot, Wash'tn	2 1/2	3450	41x5 1/2	36x4	36x7	W	Stoughton, F	3	3600	41x5 1/2	36x5 1/2	36x5 1/2	W
Lion, L	1	2330	31x5 1/2	35x5 1/2	35x5 1/2	W	Piedmont, 4-38	1 1/2	1685	31x5 1/2	34x4 1/2	34x4 1/2	W	Sullivan, E	2	3350	41x5 1/2	36x4	36x7	W
Luedinghaus, C	1	2100	31x5 1/2	35x5 1/2	35x5 1/2	W	Pierce-Arrow	2	3200	4 x 25 1/2	36x4	36x4d	W	Sullivan, H	3 1/2	4650	41x6	36x5	36x5d	W
Luedinghaus, W	1 1/2	2700	31x5 1/2	34x3 1/2	34x5	W	Pierce-Arrow	3 1/2	4350	41x5 1/2	36x5	36x5d	W	Superior, D	1	1650	31x5 1/2	34x4 1/2	34x4	I
Luedinghaus, W	2 1/2	3150	41x5 1/2	36x4	36x7	W	Pioneer, 50	1	1550	28x4 1/2	32x4 1/2	32x4 1/2	W	Superior, E	2	2600	41x5 1/2	34x4 1/2	34x6	I
Maccari, L	1 1/2	2925	41x5 1/2	36x4	36x6	W	Pittsburgher, C-21	2 1/2-3	3500	41x5 1/2	36x5	40x6d	W	Super Truck, 50	2 1/2	3300	4 x 20	36x4	36x8	W
Maccari, H-2	1 1/2	3650	41x5 1/2	36x4	36x4d	W	Pony	...	400	28x4 1/2	28x3 1/2	28x3 1/2	C	Super Truck, 70	3 1/2	4300	41x6	36x5	40x5d	W
Maccari, M-2	3 1/2	4500	41x6	36x5	36x5d	W	Power, F	1 1/2	...	31x5 1/2	36x6	36x6	W	Super Truck, 100	5	5300	41x6	36x5	40x12	W
Maccari, G	5	5500	41x6	36x6	40x6d	W	Power, C	3 1/2	...	41x5 1/2	36x5	40x10	W	Super Truck 150	7 1/2	6300	5 x 20	36x6	40x12	W
MacDonald, A	7 1/2	5750	41x6	40x7	40x14	I	Premercar, B-143	1 1/2	2475	31x5 1/2	36x6 1/2	36x6 1/2	W	Texas, A38	1 1/2	1095	31x5 1/2	33x4	35x4	I
Mack, AB D.R.	1 1/2	3450	4 x 25	36x4	36x3 1/2	I	Ramier, R-11	3/4	2150	21x5 1/2	35x5 1/2	35x5 1/2	W	Texas, TK39	1 1/2	1550	31x5 1/2	36x6	36x7	W
Mack, AB	2 1/2	3400	4 x 25	36x4	36x4d	C	Ramier, R-19	1	2350	31x5 1/2	34x3 1/2	34x4	W	Tiffin, GW	1 1/2	2400	41x5 1/2	36x3 1/2	36x5	W
Mack, AB Chain	1 1/2	3000	4 x 25	36x4	36x3 1/2	I	Ramier, R-16	1 1/2	2800	31x5 1/2	34x3 1/2	34x5	W	Tiffin, MW	2 1/2	3100	41x5 1/2	36x4	36x3 1/2	W
Mack, AC Chain	3	3300	4 x 25	36x4	36x4d	C	Ramier, R-18	2	2950	41x5 1/2	34x4	34x6	W	Tiffin, PW	3 1/2	4100	41x5 1/2	36x5	40x5d	W
Mack, AB D.R.	2	3750	4 x 25	36x4	36x4d	C	Ramier, R20	2 1/2	3600	41x5 1/2	34x4	34x7	W	Tiffin, F50	5	4800	41x6	36x6	40x6d	W
Mack, AC Chain	3 1/2	4950	5 x 20	36x5	40x5d	C	Ramier, R-15	3 1/2	4501	41x5 1/2	36x5	36x5d	W	Tiffin, F60	6	5000	41x6	36x6	40x12	W
Mack, AC Chain	5	5500	5 x 20	36x6	40x6d	C	Ramier, R-17	5	5250	41x6	36x6	36x6d	W	Titan, HT	3 1/2	4550	41x6	36x4	40x5d	I
Mack, AC Chain	6 1/2	5750	5 x 20	36x6	40x12	C	Ranger, RK-20-2	2	...	31x5 1/2	36x6 1/2	36x6 1/2	W	Titan, HD	5	5400	41x6	36x5	40x6d	I
Mack, AC Chain	7 1/2	6																		

Specifications of Current Motor Truck Models—Continued

NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES Front Rear	Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES Front Rear	Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES Front Rear	Final Drive
Watson, E	1	\$1865	3 1/2 x 5 1/2	35x5 1/2 35x5 1/2	W	Wichita, S	5	\$5000	4 1/2 x 6	36x6 40x6d	W	Winther, 39	1 1/2	\$2450	3 1/2 x 5	34x3 1/2 34x5	1
Watson, N	3 1/2	4250	4 1/2 x 5 1/2	36x5 36x10	W	Wilcox, AA	1	2100	3 1/2 x 5 1/2	36x4 36x4	W	Winther, 49	2	3250	4 x 5	34x4 34x4d	1
Western, W1 1/2	1 1/2	2550	4 1/2 x 5 1/2	36x3 1/2 36x5	W	Wilcox, B	1 1/2	2775	4 1/2 x 5	36x4 36x5	W	Winther, 50	2 1/2	3995	4 x 5	38x7 1/2 42x9 1/2	1
Western, L1 1/2	1 1/2	2550	3 1/2 x 5	36x3 1/2 36x5	W	Wilcox, D	2 1/2	3300	4 1/2 x 5	36x4 36x3 1/2	W	Winther, 70	3 1/2	4200	4 x 5	36x5 36x5d	1
Western, W2 1/2	2 1/2	3250	4 1/2 x 5 1/2	36x4 36x7	W	Wilcox, E	3 1/2	4250	4 1/2 x 5 1/2	36x5 36x5d	W	Winther, 450	2 1/2	3690	4 x 5	34x5 36x6	1
Western, L2 1/2	2 1/2	3250	4 1/2 x 5 1/2	36x4 36x7	W	Wilcox, F	5	5200	4 1/2 x 6 1/2	36x5 40x6d	W	Winther, 109	5	5250	4 1/2 x 6	36x6 40x5d	1
Western, W3 1/2	3 1/2	4250	4 1/2 x 5 1/2	36x5 40x5d	W	Wilson, EA	1 1/2	2270	3 1/2 x 5	36x3 1/2 36x5	W	Winther, 140	7	5900	5 x 6	36x6 40x7d	1
White, 15	3 1/2	2400	3 1/2 x 5 1/2	34x5 1/2 34x5 1/2	B	Wilson, G	2 1/2	2825	4 1/2 x 5 1/2	36x4 36x7	W	Wisconsin B	1	1950	4 x 5 1/2	34x5 1/2 34x5 1/2	W
White, 20	2	3250	3 1/2 x 5 1/2	36x4 36x7	D	Wilson, H	3 1/2	3685	4 1/2 x 5 1/2	36x5 36x5d	W	Wisconsin C	1 1/2	2500	4 1/2 x 5 1/2	36x6 36x6 1/2	W
White, 40	3 1/2	4200	4 1/2 x 5 1/2	36x5 40x5d	D	Winther, 751	5	4520	4 1/2 x 6	36x6 40x6d	W	Wisconsin D	2 1/2	3500	4 1/2 x 5 1/2	36x6 36x10	W
White, 45	5	4500	4 1/2 x 5 1/2	36x6 40x6d	D	Winther, 439	1 1/2	1795	3 1/2 x 5	34x4 1/2 35x5 1/2	1	Wisconsin E	3 1/2	4000	5 x 6 1/2	36x6 36x12 1/2	W
White Hick., E	1	2450	3 1/2 x 5	34x5 1/2 34x5 1/2	W			2850	3 1/2 x 5	32x4 32x4	1	Witt-Wall, N	1 1/2	2750	3 1/2 x 5	36x3 1/2 36x5	W
White Hick., H	1 1/2	2750	3 1/2 x 5	36x3 1/2 36x5	W							Witt-Wall, P	2 1/2	3250	4 1/2 x 5 1/2	36x3 1/2 36x5	W
White Hick., K	2 1/2	3350	4 1/2 x 5 1/2	36x4 36x5	W							Wolverine, J	1	2125	3 1/2 x 5	34x3 34x4	1
Wichita, K	1	2300	3 1/2 x 5	36x3 1/2 36x4	W							Wolverine, J	1 1/2	2375	3 1/2 x 5	34x3 1/2 34x5	1
Wichita, L	1 1/2	2600	3 1/2 x 5 1/2	36x3 1/2 36x5	W							Wolverine, J	2	2640	3 1/2 x 5	34x4 34x7	1
Wichita, M	2	2800	3 1/2 x 5 1/2	36x3 1/2 36x6	W							Wolverine, J	2 1/2	3125	4 1/2 x 5 1/2	36x5 36x10	1
Wichita, R	2 1/2	3000	4 1/2 x 5 1/2	36x4 36x7	W							Wolverine, L	3 1/2	4100	4 1/2 x 5 1/2	36x5 36x10	1
Wichita, RX	2 1/2	3600	4 1/2 x 6	36x4 36x8	W							Yellow Cab M21	3 1/2	2050	3 1/2 x 5	32x4 32x4	B
Wichita, O	3 1/2	4000	4 1/2 x 6	36x5 36x5d	W							Yellow Cab M41	1 1/2	2350	3 1/2 x 5	34x4 1/2 34x4 1/2	W

*2-cyl. †6-cyl. ‡8-cyl. All others, not marked.
are 4-cyl. Trac. Tractor. **Canadian made.
Final Drive: W—Worm, I—Internal Gear.
C—Chain, D—Double Reduction, B—Bevel, 4—
Four-Wheel, E—External Gear. *Tires—optional.
†Pneumatic Tires. All others solid. ‡Price in-
cludes body. §—Price includes several items of
equipment.

Farm Tractor Specifications and Prices

TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Flow Capacity	TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Flow Capacity
All-In One	16-30	\$1975	3	Clim.	4-5 x 6 1/2	GDK	3-4	Gray, 1920	18-36	\$2000	3	Wauk	4-4 1/2 x 6 1/2	Gas.	4
Allis-Chalm. B	6-12	927	3	LeR.	4-3 1/2 x 4 1/2	Gas.	1	Ground Hog	19-31	2000	4	Erd.	4-4 x 6	Gas.	3
Allis-Chalm. G.P.	6-12	850	2	LeR.	4-3 1/2 x 4 1/2	Gas.	1-2	Gt. Western St	20-30	1950	4	Beav.	4-4 1/2 x 6	K.	4
Allis-Chalm. L	12-20	1495	2	Mid. W	4-4 1/2 x 5 1/2	Gas.	2-3	Hart-Parr, 20	20	995	4	Own	2-5 1/2 x 6 1/2	K.D	2
Allis-Chalm. L1	18-0	2150	4	Own	4-4 1/2 x 6 1/2	G.K	3-4	Hart-Parr, 30	30	1595	4	Own	2-6 1/2 x 7	K.D	2
Allis-Chalm. L2	10-18	875	4	Own	4-4 1/2 x 6 1/2	G.K	4	Heider, D	9-16	1170	4	Wauk	4-4 1/2 x 5 1/2	G.K	2
Allwork, 2-G	14-28	1875	4	Own	4-4 1/2 x 6	G.K	3	Heider, C	12-20	1395	4	Wauk	4-4 1/2 x 6 1/2	G.K	2
Allwork, C	14-28	1875	4	Own	4-5 x 6	G.K	3	Heider, Cult	6-10	1050	4	LeR.	4-3 1/2 x 4 1/2	Gas	1
AndrewsKin.D	18-36	2500	4	Clim.	4-5 x 6 1/2	G.K	4	Hicks	20-30	1885	4	Wauk	4-4 1/2 x 6	Kort	4
Appleton	12-20	1500	4	Buda	4-4 1/2 x 5 1/2	G.K	2-3	Huber Light 4	12-25	1185	4	Wauk	4-4 1/2 x 5 1/2	G.K	3
Aro, 1921	3-5	550	4	Olim.	1-4 1/2 x 5	Gas	1	Huber Super 4	15-30	1885	4	Midw.	4-4 1/2 x 6	Gas.	3
Aultman-T.	15-30	2200	4	Own	4-5 x 6 1/2	G.K	4	Illinois, Super	18-36	2375	4	Clim.	4-5 x 6 1/2	G.K	4
Aultman-T.	22-45	3500	4	Own	4-5 1/2 x 8	G.K	6	Imperial, E	40-70	5000	4	Own	4-7 1/2 x 9	G.K, D	10
Aultman-T.	30-60	5000	4	Own	4-7 x 9	G.K, D	8	Indiana, F	5-10	895	2	LeR.	4-3 1/2 x 4 1/2	Gas	1-2
Automat. B-3	12-24	1785	4	Own	4-7 x 9	G.K, D	8	International, F	8-16	900	4	Own	4-4 1/2 x 5 1/2	G.K, D	2
Avery, S.R. Cult	5-10	1785	4	Own	4-3 1/2 x 4	G.K	2	International, L	15-30	1750	4	Own	5-1/2 x 8	G.K, D	4
Avery, Cult-C	5-10	1785	4	Own	4-3 1/2 x 4	G.K	2	J-T	20-40	3485	2	Chief	4-4 1/2 x 6	G.K, D	3-4
Avery, B	5-10	1785	4	Own	4-3 1/2 x 4	G.K	2	Klumb, F	16-32	1650	4	Clim.	4-5 x 6 1/2	Gas	4-6
Avery, C	5-10	1785	4	Own	4-3 1/2 x 4	G.K	2	Knauss, 1920	25-45	2500	4	Own	4-5 x 9	Gas	4-6
Avery, D	5-10	1785	4	Own	4-3 1/2 x 4	G.K	2	LaCrosse, M	6-12	650	4	Own	2-4 1/2 x 6	G.K	1
Avery, E	5-10	1785	4	Own	4-3 1/2 x 4	G.K, D	2-3	LaCrosse, G	12-24	985	4	Own	2-6 1/2 x 7	G.K	3
Avery, F	5-10	1785	4	Own	4-3 1/2 x 4	G.K, D	2-3	Lauson	12-25	1495	4	Midw.	4-4 1/2 x 6 1/2	G.K	3
Avery, G	5-10	1785	4	Own	4-3 1/2 x 4	G.K, D	2-3	Lauson	15-25	1685	4	Beav.	4-4 1/2 x 6	G.K	3-4
Avery, H	5-10	1785	4	Own	4-3 1/2 x 4	G.K, D	2-3	Lauson, 21	15-30	1985	4	Beav.	4-4 1/2 x 6	G.K	3-4
Avery, I	5-10	1785	4	Own	4-3 1/2 x 4	G.K, D	2-3	Lauson Road	15-30	2225	4	Beav.	4-4 1/2 x 6	G.K	3-4
Avery, J	5-10	1785	4	Own	4-3 1/2 x 4	G.K, D	2-3	Leader, B	12-18	1095	4	Own	2-6 1/2 x 6 1/2	G.K, D	2-3
Avery, K	5-10	1785	4	Own	4-3 1/2 x 4	G.K, D	2-3	Leader, N	16-32	1095	4	Clim.	4-5 x 6 1/2	G.K	3-4
Avery, L	5-10	1785	4	Own	4-3 1/2 x 4	G.K, D	2-3	Leader, GU	18-35	2775	2	Clim.	4-5 1/2 x 6 1/2	G.K	3-4
Avery, M	5-10	1785	4	Own	4-3 1/2 x 4	G.K, D	2-3	Leonard, E	20-30	2530	4	Buda	4-4 1/2 x 6	G.K	3
Avery, N	5-10	1785	4	Own	4-3 1/2 x 4	G.K, D	2-3	Liberty, A	18-32	2475	4	Clim.	4-5 x 6 1/2	G.K	4
Avery, O	5-10	1785	4	Own	4-3 1/2 x 4	G.K, D	2-3	Linn, HAJ	40	4500	4	Cont.	4-4 1/2 x 5 1/2	Gas	6
Avery, P	5-10	1785	4	Own	4-3 1/2 x 4	G.K, D	2-3	Linn, W	16-22	2200	4	Wauk	4-5 x 6 1/2	Gas	6
Avery, Q	5-10	1785	4	Own	4-3 1/2 x 4	G.K, D	2-3	Little Giant, B	16-22	2200	4	Own	4-4 1/2 x 5 1/2	Gas	6
Avery, R	5-10	1785	4	Own	4-3 1/2 x 4	G.K, D	2-3	Little Giant, A	26-35	3300	4	Own	4-4 1/2 x 5 1/2	Gas	6
Avery, S	5-10	1785	4	Own	4-3 1/2 x 4	G.K, D	2-3	Lombard	55-150	50	2	Own	6-5 1/2 x 6 1/2	Gas	10
Avery, T	5-10	1785	4	Own	4-3 1/2 x 4	G.K, D	2-3	Lombard	50	50	2	Own	4-4 1/2 x 6 1/2	G.K	6-10
Avery, U	5-10	1785	4	Own	4-3 1/2 x 4	G.K, D	2-3	Magnet, B	14-28	1875	4	Wauk	4-4 1/2 x 6 1/2	K&G	3
Avery, V	5-10	1785	4	Own	4-3 1/2 x 4	G.K, D	2-3	Master Jr	5-10	585	4	LeR.	2-3 1/2 x 4	Gas	1
Avery, W	5-10	1785	4	Own	4-3 1/2 x 4	G.K, D	2-3	Merry Gar1921	2	230	2	Evin	1-2 1/2 x 2 1/2	Gas	1
Avery, X	5-10	1785	4	Own	4-3 1/2 x 4	G.K, D	2-3	Minne. All-P	12-25	1200	4	Own	4-4 1/2 x 7	G.K	3
Avery, Y	5-10	1785	4	Own	4-3 1/2 x 4	G.K, D	2-3	Minne. Gen.P	17-30	1850	4	Own	4-4 1/2 x 7	G.K	3-4
Avery, Z	5-10	1785	4	Own	4-3 1/2 x 4	G.K, D	2-3	Minne.	22-44	3300	4	Own	4-6x7	G.K	5-6
Bates	15-25	225	4	Own	4-4 1/2 x 6	Ker.	3	Med. Duty	35-70	4600	4	Own	4-7 1/2 x 9	G.K	8-9
Bates Mule H	15-25	225	4	Midw.	4-4 1/2 x 6 1/2	Gas.	3	Mohawk 1921	8-16	785	2	Light	4-3 1/2 x 4 1/2	Kort	1-2
Bates Mule F	18-25	225	4	Midw.	4-4 1/2 x 6 1/2	Gas.	3	Moline Univ D	9-18	900	2	Own	4-3 1/2 x 5	Gas	2-3
Bates Mule G	25-35	225	4	Midw.	4-4 1/2 x 6 1/2	Gas.	3	Moline Orch	9-18	1075	2	Own	4-3 1/2 x 5	Gas	2-3
Bean	8-16	315	4	Own	4-3 1/2 x 4	G.K	3	Motor Macult	11 1/2	195	2	Own	1-2 1/2 x 3 1/2	Gas	1
Boeman, G	2-4	315	4	Own	1-3 1/2 x 4 1/2	G.K	3	Motex	15-30	2250	4	Buda	4-4 1/2 x 6	Gas	3-4
Best	30	1850	4	Own	4-4 1/2 x 6 1/2	G.K, D	8-9	NB	3-6	425	4	Own	2-3 1/2 x 4	Gas	3 1/2
Best	60	1850	4	Own	4-4 1/2 x 6 1/2	G.K, D	8-9	NB	3-6	425	4	Own	2-2 1/2 x 4	Gas	3 1/2
Boring 1921	15-30	1650	4	Own	2-6 1/2 x 7	Ker.	3-4	Nichols-Shep.	20-42	3100	4	Own	8 x 10	G.K	3-6
Burn-Oil 1921	15-30	1650	4	Own	2-6 1/2 x 7	Ker.	3-4	Nichols-Shep.	25-50	3460	4	Own	9 x 12	G.K	4-7
Capital	15-30	1000	2	Own	4-4 1/2 x 6	Gas.	3	Nilsen Jr.	15-25	1775	4	Wauk	4-4 1/2 x 5 1/2	G.K	3
Case	10-18	1090	4	Own	4-3 1/2 x 6	G.K	3	Nilsen Senior	20-40	2475	5	Wauk	4-5 1/2 x 6 1/2	G.K	4
Case	15-27	1090	4	Own	4-3 1/2 x 6	G.K	3	Oil Pull	12-20	1485	4	Own	2-6 x 8	K.D	3
Case	22-40	3100	4	Own	4-3 1/2 x 6 1/2	G.K	4-5	Oil Pull, H	16-30	2285	4	Own	2-7 x 8 1/2	K.D	4
Caterpillar T11	25	4250	2	Own	4-4 1/2 x 6	Gas.	6	Oil Pull, G	20-40	3175	4	Own	2-8 x 10	K.D	5-6
Caterpillar T16	40	6500	2	Own	4-6 1/2 x 6	Gas.	6	Oil Pull, E	20-60	4590	4	Own	2-10x12	K.D	8-10
Centaur	5 1/2 x 4	455	2	Nway	4-4 1/2 x 6 1/2	G.K or K	1-9	Oldsmar Gark	31-5 1/2	395	4	Own	1-5 1/2 x 5 1/2	Gas	2 1/2
Chase	12-25	1725	3	Buda	4-4 1/2 x 6 1/2	G.K	2-3	Oliver	15-30	1885	2	Beav.	4-4 1/2 x 6	G.K	3-4
Chicago	40	2500	4	Own	4-4 1/2 x 6	Gas.	4	Once Over Til-	12-25	3000	4	Strns	4-4 1/2 x 6	G.K	2
Cietrac	9-16	845	2	Own	4-3 1/2 x 4 1/2	G.K, D	2-3	ler Mark 6	15-30	1950	4	Pitt	4-4 1/2 x 6	G.K	3
Cietrac	12-20	1495	2	Own	4-4 x 5 1/2	G.K, D	2-3	Parrett	15-30	1950	4	Clim.	4-5 x 6 1/2	G.K	3
Dakota	15-27	1750	3	Dom.	4-4 1/2 x 6	Gas.	3	Peoria	12-25	1785	4	Own	4-5 1/2 x 6	G.K, D	4
Dart	15-30	2100	4	Buda	4-4 1/2 x 6	Gas.	3-4	Pioneer	18-36	1885	4	Own	4-7 x 8	G.K	10
Deputa	20-30	2500	4	Buda	4-4 1/2 x 6	Gas.	3-4	Pioneer	15-30	950	2	LeRoi	4-3 1/2 x 4	G.K	1
Dill	20	2480	4	Cont.	4-4 1/2 x 5 1/2	Gas.	3	Planet Jr.	3-10	950	2	Buda	4-4 1/2 x 6	G.K	3-4
Draft	20-28	2980	4	Midw	4-4 1/2 x 6	Gas.	3	Playman	15-30	1950	4	Buda	4-4 1/2 x 6	G.K	3-4
Do-it-All	7	595	1	Own	1-4 1/2 x 5	Gas.	1	Parrett	15-30	1950	4	Pitt	4-4 1/2 x 6	G.K	2
Eagle	12-22	1100	4	Own	2-7 x 8	G.K	3-4	Peoria	12-25	1785	4	Clim.	4-5 x 6 1/2	G.K	3
Eagle	16-30	1850	4	Own	2-8 x 8	G.K	4-5	Pioneer	18-36	1885	4	Own	4-5 1/2 x 6	G.K, D	4
E-B	12-20	1445	4	Own	4-4 1/2 x 5	G.K, D	3	Pioneer	15-30	950	2	LeRoi	4-3 1/2 x 4	G.K	1
E-B	12-20	925	4	Own	4-4 1/2 x 5	G.K, D	3	Planet Jr.	3-10	950	2	Buda	4-4 1/2 x 6	G.K	3-4
E-B	16-32	2000	4	Own	4-5 1/2 x 7	G.K, D	4	Playman	15-30	1950	4	Buda	4-4 1/2 x 6	G.K	3-4
Evans	18-30	2000	4	Buda	4-4 1/2 x 6	G.K	3	Parrett	15-30	1950	4	Pitt	4-4 1/2 x 6	G.K	2
Fagool	9-12	1525	4	Lye.	4-3 1/2 x 5	Gas.	3	Peoria	12-25	1785	4	Clim.	4-5 x 6 1/2	G.K	3
Farm Horse, B	18-30	1885	4	Clim.	4-5 x 6 1/2	G.K	3-4	Pioneer	18-36	1885	4	Own	4-5 1/2 x 6	G.K, D	4
Farquhar	15-25	1875	4	Buda	4-4 1/2 x 6	G.K, D	3-4	Planet Jr.	3-10	950	2	Buda	4-4 1/2 x 6	G.K	3-4
Farquhar	18-35	1875	4	Own	4-6 x 8	G.K, D	4-5	Playman	15-30	1950	4	Buda	4-4 1/2 x 6	G.K	3-4
Farquhar	25-50	1875	4	Own	4-7 x 8	G.K, D	6-7	Parrett	15-30	1950	4	Pitt	4-4 1/2 x 6	G.K	2
Fifth	20-35	1875	4	Clim.	4-5 x 6 1/2	G.K	3-4	Peoria	12-25	1785	4	Clim.	4-5 x 6 1/2	G.K	3
Floor City	20-35	1875	4	Own	4-5 1/2 x 6	Ker.	4-6	Pioneer	18-36	1885	4	Own	4-5 1/2 x 6	G.K, D	4
Floor City	30-50	1875	4	Own	4-6 1/2 x 7	Ker.	6-8	Planet Jr.	3-10	950	2	Buda	4-4 1/2 x 6	G.K	3-4
Floor City	40-70	1875	4	Own	4-7 1/2 x 9	Ker.	8-10	Playman	15-30	1950	4	Buda	4-4 1/2 x 6	G.K	3-4
Fordson	20	625	4	Own	4-4 1/2 x 5	G.K	2	Parrett	15-30	1950	4	Pitt	4-4 1/2 x 6	G.K	2
Fox	E 20-40	3100	4	Own	4-5 1/2 x 7 1/2	G.K or K	3-3	Peoria	12-25	1785	4	Clim.	4-5 x 6 1/2	G.K	3
Franklin	G 18-30	4000	2	Clim.	4-5 x 6 1/2	G.K or K	3-3	Pioneer	18-36	1885	4	Own	4-5 1/2 x 6	G.K, D	4
Franklin	C 18-30	3350	2	Clin	4-5 1/2 x 6 1/2	G.K or K	3-4	Planet Jr.	3-10	950	2	Buda	4-4 1/2 x 6	G.K</	

MOTOR WORLD

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But They're Doing It!



Finding People Who Can Buy

The Story of How a Typical Marmon Distribution Territory Was Analyzed and Made to Produce Greatly Increased Sales

By H. L. PETERSON

Sales Department, Nordyke & Marmon Co., Indianapolis

FOR more than a year automobile dealers throughout the United States have been making excuses, offering alibis, and presenting explanations for the drop in their business during that period. Everything from the financial stringency to the national political situation has been attributed as the cause. The only uniformity which has been observed in all these explanations has been the dealer's invariable attachment of blame to circumstances outside his own organization and over which he has no control.

In spite of the undoubted sincerity of these explanations and the honesty of purpose of their makers, they have not been satisfying nor altogether convincing—for *scattered here and there throughout the country have been striking examples of consistent business—and in many cases increased business.* A study has resulted in some very interesting conclusions.

AN analysis of a typical situation revealed a dealer organization well equipped for service—in fact rendering good service—owners apparently well satisfied. The salesmen were energetic—but *the retail dealers obviously lethargic*—with all indication of having been so for some time. The distributor had a rather extensive but sadly neglected and antiquated mailing list, although the follow up system was theoretically good. An examination of the prospect list showed a constant and perceptible decrease in spite of extensive advertising appropriations. An analysis of the list showed that it was made up largely from prospects secured at the annual show and from such other sources as:

1. *Answers to advertisements.*
2. *Personal calls at the salesroom.*
3. *"Tips" given by owners and friends.*

In other words, practically every man on the dealers' list of prospects had *placed himself there* either through correspondence, calls or conversation and through no consistent, predetermined or studied method on the part of the dealer.

The value of dealers' franchises lies not in the number of counties controlled, or in the number of square miles included within the contract boundaries—but in the number of people in those territories with the ability and "possible" inclination (inclination which can be stimulated to action by proper sales methods) to buy the products the dealers have to sell. Proceeding, therefore, on the theory that the first essential to the sale of automobiles is the location of prospects with the money and "developable" inclination to buy, it was decided to study the mailing and prospect lists (the tabulated market) of the dealer chosen in an effort to discover the reason underlying the failure to make sales.

For a very nominal consideration arrangements were made with an employee of the Secretary of State to furnish, for a specific period, for certain counties the names of persons registering cars considered competitive with the one represented by the dealer.

The result was startling!

Thirty-five people had purchased competitive cars.

Twenty-eight of them were *absolutely unknown to the dealer*, he had no record of their existence, much less any clue that they might possibly be in the market for a car of the class he had to sell. In other words, four out of five purchasers were neither on his prospect nor mailing list—a *list which should represent the potential market of his territory.*

While the remaining seven were on his mailing list, only two of them had actually been called upon by salesmen and none had received a demonstration; naturally no sales had been made.

Thus it was disclosed that less than 15 per cent of the people who were in the market, buying competitive cars, during this period of analysis, were being brought in contact with the sales story of the car the dealer had to sell, and none of them had been given an opportunity to test its actual performance in comparison with cars they later bought. The full significance of this can be appreciated when it is considered, too, that the car in question is sold largely on performance capabilities.

And yet the dealer was wondering why sales had fallen off when he was attempting to function with a mailing and prospect list bringing him in contact with less than 15 per cent of the actual purchasers of *his type and class of car*; when he had no conception or appreciation of the possibilities which lay within his reach provided he *organize and work.*

During the "seller's market," the period when buyers were seeking the dealer and when the dealer's greatest question was not "to whom shall I sell cars?"—but "how shall I secure deliveries for insistent buyers?" this old list had proved entirely adequate. But, under the stress of a highly competitive "buyer's market" it was insufficient, for this market requires a complete knowledge of possible buyers and an aggressive campaign of advertising and selling to secure their orders.

The first step in remedy, therefore, was a *correction of the dealer's mailing and prospect list*—a revision upward—to give him a knowledge of the persons in his territory *financially able to purchase the product he had to sell.* For the particular territory in question a minimum basis of

\$50,000 estimated valuation and \$35,000 assessed valuation was chosen and this information secured by county for the entire territory. **THE COST WAS INCONSEQUENTIAL.**

It was appreciated, however, that these sources would not uncover many who, while not wealthy, had sufficient incomes to own cars of the class sold by the dealer. Also, some with neither justifiable capital nor income, but an overpowering appreciation for high grade cars prompting them to buy them at the sacrifice of some other item. To gain contact with these "overbuyers" and round out the other sources of information—the names and addresses of all competitive car owners were secured.

A combination and cross check of these three sources of information:

1. Commercial lists of estimated valuation.
2. Government lists of assessed valuation.
3. Owners of competitive cars.

This gave the potential market under the dealer's supervision. It told him *who in his territory could be considered as possible buyers for the product he had to sell.*

The next problem was to gain contact and make sales—and here the effort was not limited to the territory imme-

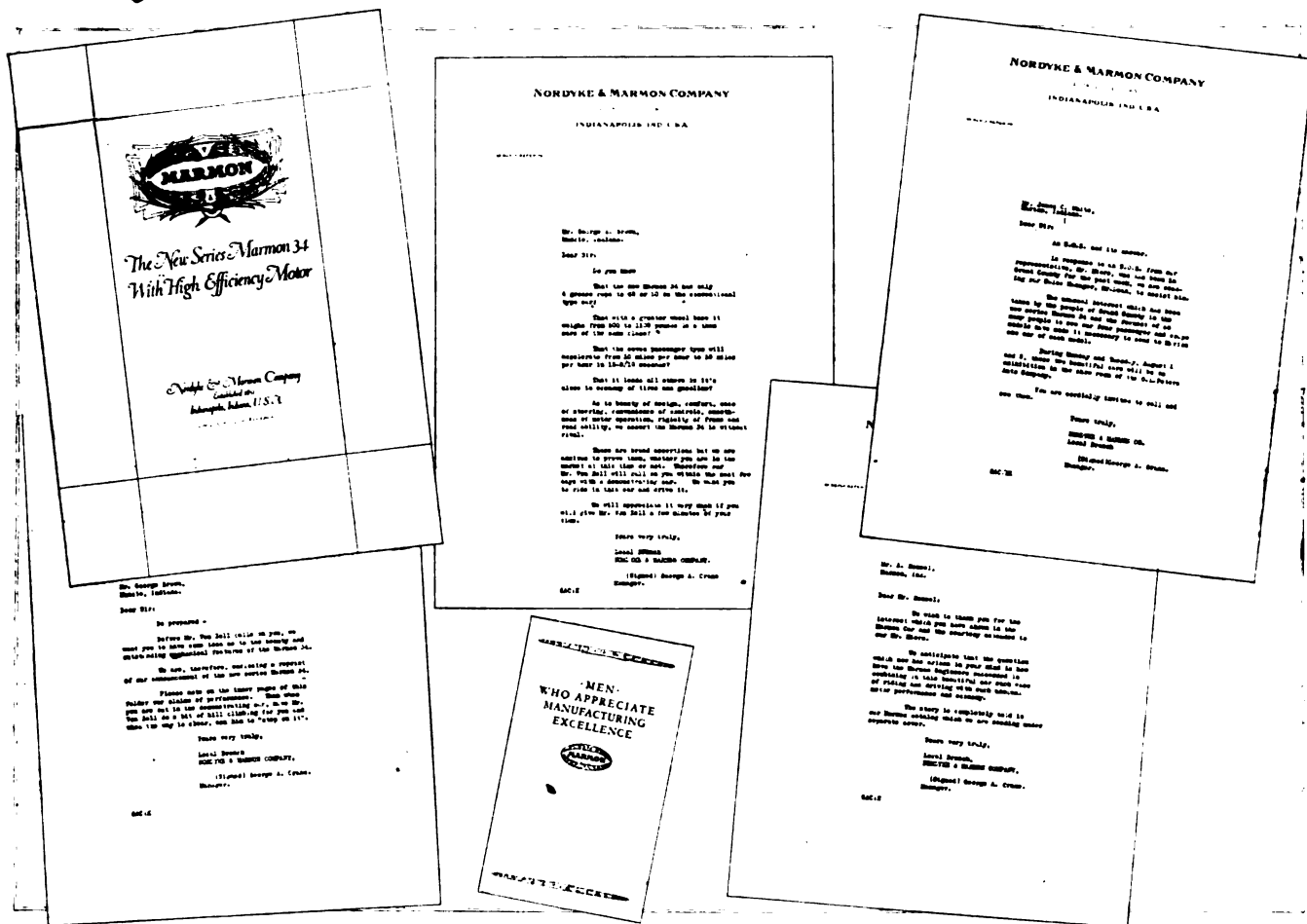
diately surrounding the dealer's headquarters, but concentrated drives were made into the outlying districts—so often neglected. It was here the surprising results were obtained.

Time was not wasted waiting for these newly discovered "possibilities" to evidence an interest or come to the sales rooms; "Mahomet went to the mountain." A series of sales letters, followed by personal calls, maintained consistently and followed up intelligently, yielded results that drove the sales curve up sharply and have held it there.

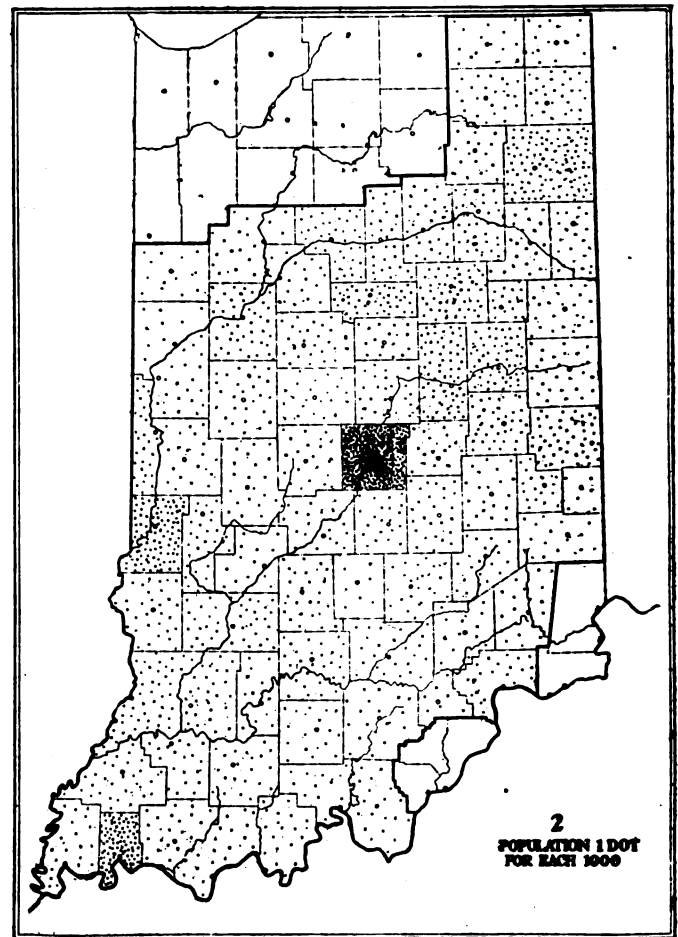
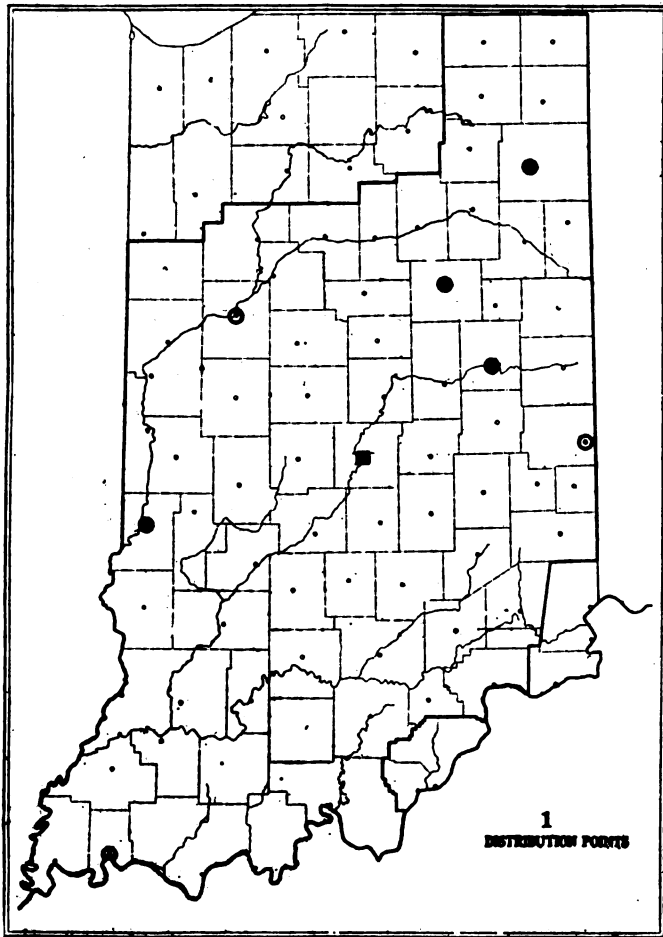
In many of the cities evidencing sufficient interest local shows were held, several cars displayed, and demonstrations given. The results were gratifying not only in the immediate impetus given sales, but also in the awakening of the dealer organization, its development from a lethargic group of five to an alert, aggressive organization of *ten*, an organization developed as a result of the initial start given by the campaign—maintained by an adherence to the principles on which it was based—a principle incidentally even at this moment enabling the organization to over-sell its monthly allotted quota with unfailing regularity.

Scientific territorial study with intelligent, consistent application *pays in dollars and cents.*

A Selling Campaign Based on Sales Analysis



When Marmon analyzed a typical selling territory, sales letters and circulars were used to open the way for personal sales effort. The first letter, shown in the center of the above group, was sent to the call list to make it easier for the salesman to secure an audience on his first call. With it went the small pamphlet under it. The second letter, in the lower left hand corner, was aimed chiefly to arouse curiosity. An enclosure listing performance capabilities was sent to induce the prospect to ask for verification through a demonstration. After the demonstration the third letter, in the lower right hand corner, went forward with the Marmon catalog. When certain localities seemed to justify it "shows" were held in some logical, neat appearing salesroom, and the letter in the upper right hand corner was sent



A Territory's Selling Value Is Not in Square Miles, but in Inclination to Buy

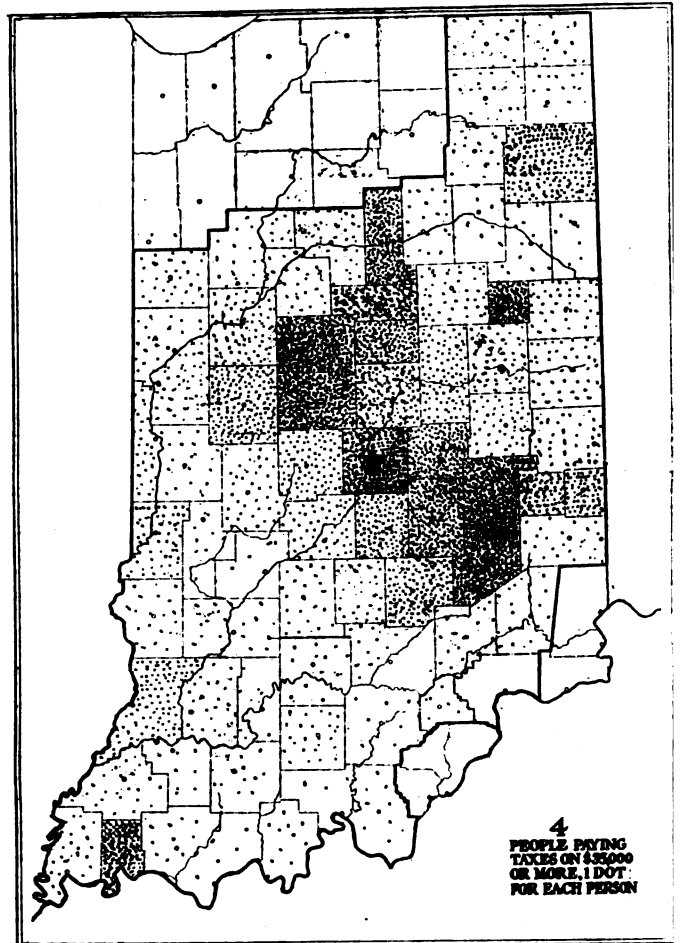
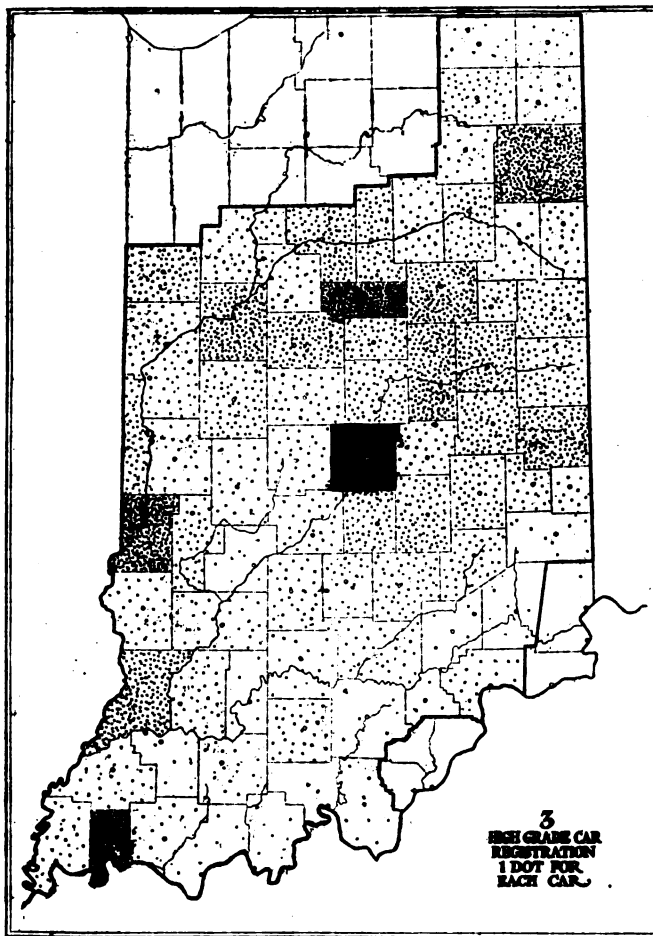
THE maps on these pages show how a typical Marmon selling territory was analyzed for sales. They presented a "picture" of the number of people in the territory with the ability and the possible inclination to buy Marmon cars.

Map No. 1—The circles with the white space inside designate the points at which the distributor (designated by a black square) had dealers when this analysis was made. At the present time the distributor has not only representation in these places, but in addition has representation at four other points represented by the black dots.

Map No. 2—This map represents the distribution of population in the distributor's territory, each dot representing 1000 people ac-

cording to the 1920 census. It gave the distributor a picture of his territory and where his prospects are probably most numerous. It is an indication only, however, and must be supplemented and supported by the other analyses.

Map No. 3—This map shows the distribution of high grade cars within the dealer's territory—those within the competitive price class taken from 1920 registration. This is the most significant chart of the group, for it shows the dealer where his competitors have done business and where he in turn can expect to do it. It is of great assistance, particularly in his wholesale work, because from it he knows where the sub-dealers should be located. One of the best ways to build up a mailing list is to secure the actual names of these high grade

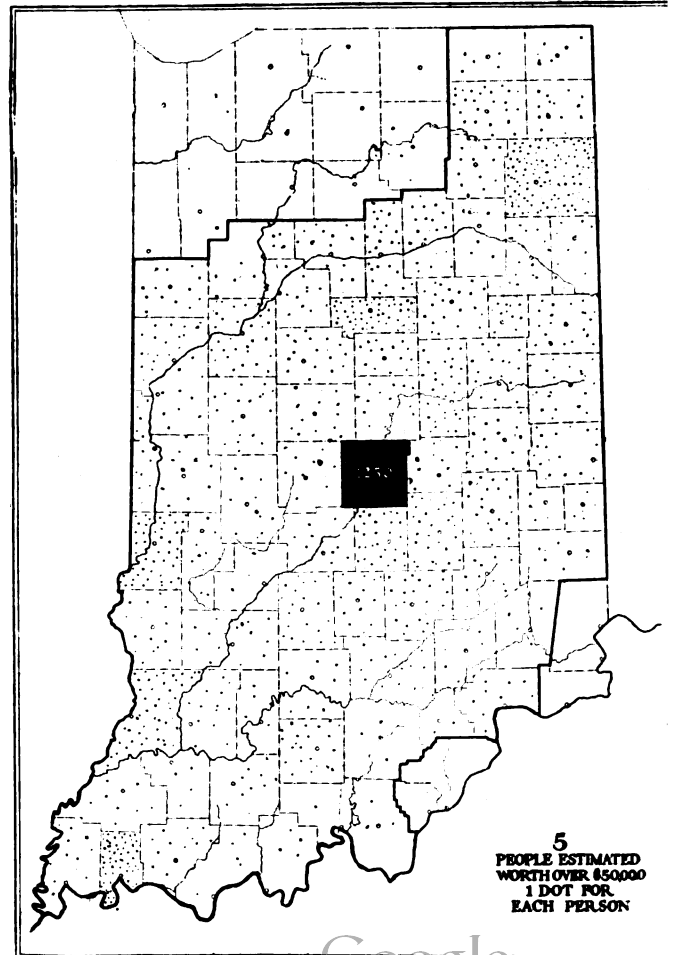


car owners. It was done in this campaign.

Map No. 4—This map shows the distribution of people paying taxes in the various counties in the distributor's territory, paying taxes on \$35,000 or more, one dot representing one such person.

Map No. 5—This map shows the distribution of people worth \$50,000 or more. In drawing conclusions from this and the previous map the dealer should not overlook the fact that there is a certain class of people below this par in wealth or earning power who crave cars of the Marmon type, and they can be secured by extending the analysis to include owners of cars in and just below the Marmon price class.

The strength of the suggestions in these maps and in the accompanying story is in the fact that dealers in the other price classes may work out similar sales analyses by seeking through these means the facts that are pertinent to their particular classes.



How One Dealer Is

Selling Commercial Cars Now!

The Story of a Philadelphia Concern That Has Increased Sales 25 Per Cent Over 1920 by Installing a Concentrated Vocational Sales Promotion Plan

PROOF that determination to progress in the face of present difficult business conditions may be crowned with success where common-sense methods are pursued is furnished by the commercial car department of the Thornton-Fuller Automobile Co., Philadelphia, which deals in and distributes Dodge Bros.' cars. Concretely, while

many concerns handling trucks are complaining that they are selling few, if any, of these vehicles; are just "holding their own"; or are drawing on their reserve funds, hoping for better times, *this house asserts that its business in the commercial car department has increased over last year's fully 25 per cent.*

SALES for the last four months have advanced considerably beyond the figures for the corresponding period last year and especially in the last two months, for which figures are submitted—August and September—is the trend of progress especially noticeable. In June, in which month a price cut was made, the increase in sales was unusually prominent.

Here is a comparative table of the company's commercial car sales for the period from May 1 to Sept. 20, for the present year and 1920:

SALES, 1921		SALES, 1920	
No. of Trucks		No. of Trucks	
May	15	May	23
June	28	June	16
July	20	July	19
Aug.	24	Aug.	18
Sept. (up to 20th only)	15	Sept. (entire month)....	16

As prospects are not coming in to purchase trucks, as is very well realized throughout the trade, any such increase in business at this time, as shown by the foregoing figures and the statement that sales for the year thus far are at least 25 per cent better, *means that these sales are the result of increased effort.*

How was this accomplished? It is interesting to note that the methods employed are of the "common-sense" kind that can be imitated. Some of them call for a comparatively small expenditure of funds for the returns and others mean a considerable financial layout, but evidently one worth while.

The territory is being worked more closely. This plan, explained William C. Mullin, general manager of the company, rather recently included the reduction, to a certain extent, of the territory in which Philadelphia County and City are identical; and part of Delaware County, including certain townships.

While the city and immediate vicinity still are covered, there has been a narrowing of the field and a more intensive cultivation of it.

"Junior" salesmen are employed to locate prospects and do "scout work." One of the important ways in which the

field is being combed more thoroughly is by the employment of what is known as junior salesmen. These men, less experienced than the senior salesmen, as the other grouping is known in this house, canvass their allotted territory

It CAN Be Done!

THE Thornton-Fuller Automobile Co., Philadelphia, is selling commercial cars **RIGHT NOW.** It is plugging away for greater sales volume and getting it by:

- 1—Reducing territory and increasing sales force.
- 2—Employing junior salesmen to locate prospects and help seniors find more time for closing efforts.
- 3—Launching a thorough sales promotion campaign.
- 4—Concentrating on vocational lines, canvassing an entire business or industry at a time.

The plan works. It has increased the commercial car sales steadily over those of last year fully 25 per cent.

Let's read how it was done!

and, as soon as a prospect has been located, report the name and other data to the particular senior salesmen under whose supervision they are working. While the juniors do the "scouting" and "rough" work, leaving the seniors more time for such important phases as approaching the closing point and closing the sale, occasionally a junior is able, himself, to successfully close the deal, though this is the exception. Of course, a junior may make several calls on his prospect, but the senior, under whose tutelage he is, loses no time in following

up the junior's first call, even though he may send the junior on several calls to that prospect thereafter.

A sales promotion department is of great assistance. The company not long ago installed a sales promotion department, which has proved a great help to the business car department, not only in following up the prospect, but in following up the salesman and in linking him up with the prospect so as to keep him prominent in the latter's consciousness.

This sales promotion department works in nicely with the system of having senior and junior salesmen, through a direct by mail campaign. By this means, and by the reduction of the size of the territory and the addition of salesmen therein, the company has found that it gets better results in its business car department. Under a less intensive method it was found that sometimes the prospect would get cold toward the sale proposition or would decide, before the deal could be closed, that he would make his old car, if he had one, last him six months longer. Then, as the juniors were thrown into the field, it was found that they soon turned up so many prospects that the seniors could not cover all the work.

The direct by mail campaign for each prospect lasts eighteen weeks, if necessary. As soon as a junior salesman finds a prospect for the commercial car department and has reported the name and other data to his immediate senior, who calls, the sales promotion department begins its timely bombardment, the "heavy artillery," in the way of follow-up by mail, coming about two weeks apart to the end of the campaign to land the prospect as a customer. The light types of business car put out by the Dodge Bros. lend themselves to a multiplicity of uses in many lines of trade; the model selling best at present in the Philadelphia territory being the 1000-lb., panel body delivery car. The business of a prospect having been reported to the office, a suitable follow-up

letter is sent to him, with a small booklet illustrated in half-tones with twelve different models.

Under each type of car shown—which is an actual model purchased by some business house and photographed, showing the firm name on the car—is a testimonial from the purchaser. The booklet is entitled "Delivering the Goods in Philadelphia; One Dozen Reasons Why Dodge Bros.' Business Car Would Be a Profitable Investment in Your Business." The book is attractively lithographed. In the back is a partial list of other Dodge business car owners in Philadelphia, presenting a decidedly local appeal and giving the prospect every opportunity to learn at first hand what satisfaction the cars have been giving their owners.

A set of three artistic, colored post-cards is then sent out—an interval of two weeks elapsing between the arrival of each. Each card will depict a scene in which a different business is symbolized—for instance, a dry goods or department store, with woman customer sitting before the counter examining articles shown by a saleswoman and at the side a cut of a Dodge car appropriate to the business—a panel body—with the suggestion: "For goods requiring to be carried under cover, the panel type of Dodge Brothers' Business Car provides protection and an admirable appearance."

The second card may represent a grocery, also with cut of suitable car and legend accompanying it; while the third may portray a butcher shop, with appropriate setting, cut and inscription with the illustration.

The next step is the sending of a second mimeographed letter to which is clipped a return postal. The postal says:

"Without obligating myself in any way, I desire a demonstration in a Dodge Brothers' type car at hour on day, date. Will you kindly have your representative call at my business.... home Address. Signature. Date Address

The letter reads as follows:

"A few actual figures on the popularity of Dodge Brothers' business car may help you to see why we are so determined in our belief that it would be an asset to your business."

"There are now fully 2000 business men who use three or more Dodge Brothers' cars in almost every conceivable line of work."

"These figures do not include thousands of others who operate one or two of the cars. These fleet owners, as a rule, used one Dodge Brothers' car to begin with, and later orders were simply affidavits of satisfaction. They quickly learned that the car can always be depended on."

"With a Dodge Brothers' business car on the street you can feel sure that your prestige as a business man is not suffering by the public's inevitable tendency to compare appearances. It is a very dignified advertisement as well as a dependable delivery car. This is why such firms as Tiffany choose it to represent them on the streets of New York City. It is the car that truly reflects their standing."

"You should have one of these cars. The standard under which you do business deserves nothing less dignified. Will you kindly fill in and mail the inclosed card to us upon receipt of this letter?"

"Very truly yours,

"THORNTON-FULLER AUTOMOBILE CO.

"By

"Commercial Car Department.

"N. B.—Look for the booklet, 'Fifteen Million Dollars' Worth of Evidence,' which will follow."

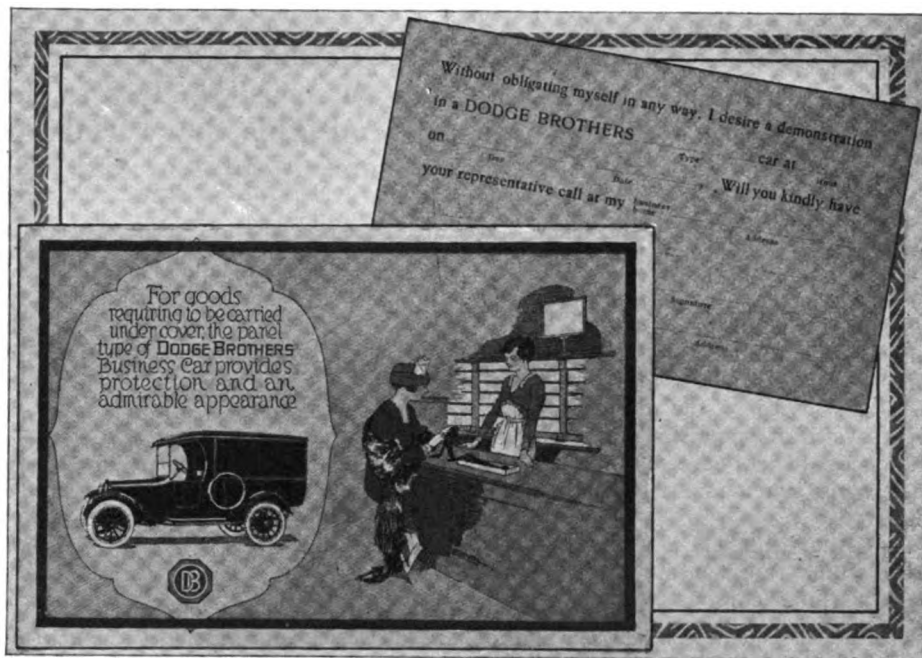
This booklet referred to, a handsome

brochure of 48 pages, lithographed in colors, is factory matter. It presents the names and addresses of more than 1600 users of Dodge Brothers' cars, representing an investment of approximately \$15,000,000. The use, type and number of cars to each owner are listed and the types of business are classified.

department and specialty stores, hardware dealers, oil companies, shoe stores, packers and many others.

For this purpose Mullin has obtained a valuable and unusual aid in an industrial directory of Pennsylvania, issued by the State Board of Compensation. This volume lists all business and industrial

This Sales Ammunition Hit the Mark



These are two of the forms that helped the Thornton-Fuller Automobile Co., Philadelphia, to increase sales in the face of "depression." The large post-card, colored, was sent to drygoods men—there were others, especially designed to appeal to other businesses. The small post-card, when returned, meant a sale nine times out of ten. These were used in the concentrated vocational selling plan used by the Philadelphia concern

Following this booklet at the proper interval comes the second and final set of illustrated colored post cards, on the order of the first issued.

Following the substantial reduction in the prices of business cars last June, the Thornton-Fuller company sent out 2500 folders with the announcement of the cut in each type of car. Inclosed and attached by a blue seal was a post card for return, which said:

"We are willing to be shown, without any obligation on our part, how our cost of hauling can be materially reduced."

"Signature"

"Address"

A folder and return postal of this kind may be sent to a prospect at any convenient time during the follow-up campaign. A senior salesman will demonstrate the cost reduction in hauling.

In addition to the phases of the campaign already described, the company is making an "attack" along vocational lines—canvassing through junior salesmen an entire line of business at a time, with the intention of taking in turn all for which the light types of delivery cars are suited, such, for instance, as laundries, fruit stores, dyers and cleaners, cigar dealers, groceries, commission merchants, meat markets, towel and apron supply dealers, florists, confectioners, bottlers, bakeries, druggists, banks, jewelers, tire and accessory dealers, dry goods,

establishments in the State, classifying them, naming their owners and giving the number of employees of each, which is more or less of an indication of financial standing and the type of car that would be suitable.

"If, for instance," says Mullen, "we are seeking prospects among undertakers, and note in this book that a funeral director has two or more employees, it indicates that he is a prospect for one of our cars."

"In the case of cigar firms, where we find that the house has a large number of salesmen who travel about the country, it is ten to one that there are prospects among them never yet approached by our salesmen, as these cigar salesmen are absent most of the time. Now we can go after them."

The company receives in the mails about 4 per cent of the return postals requesting a demonstration, issued with the second follow-up letter, and about 8 per cent of the return postals asking for an exposition of reduction in hauling costs; but the receipt of one of the former, nine times out of ten, experience has proved, means a sale.

"I attribute the recent increase in our business in commercial cars largely to the efforts of our direct by mail campaign and sales promotion department," says Mullin.

ASK 'EM TO BUY

It Means Profits for You

This Is the Keynote of the A. E. A. Merchandising Campaign Undertaken to Assist Dealers in Selling Automotive Equipment—And This Story Tells What the Campaign Means to Jobbers and Dealers

THE Merchandising Department of the Automotive Equipment Association, organized to assist the trade in selling the products of the industry, has undertaken four distinct lines of activity. They are:

1—Addresses by the merchandising director, Ray W. Sherman, before audiences of jobbers, salesmen and dealers in various sections of the country.

2—Circulation of a prepared address which representatives of jobber organizations can deliver at dealer meetings.

3—Publication of a semi-monthly publication, *The Automotive Equipment Merchandiser*, which will be sent to the salesmen of both manufacturer and jobber members.

4—Publication of a text-book on modern methods of retailing automotive equipment.

In the short time since the merchandising department was organized following its authorization at the Mackinac Island meeting of the Automotive Equipment Association, Merchandising Director Sherman has told the story of the movement to audiences of jobbers and jobber salesmen, and in some cases retailers, in eleven cities of the United States and Canada. Appearances of the director have already been made in New York, Chicago, St. Louis, Milwaukee, Columbus, Canton, Montreal, Toronto, Louisville, Memphis, and Lincoln, Ill. Sherman's work will keep him frequently in touch with the trade in this way, but owing to the physical impossibility of his selling the better merchandising story personally in all parts of the country, an address has been prepared which can be delivered by a jobber to his salesmen or by the representative of a jobbing house to a group of dealers. This address is ready for circulation to members of the A. E. A. requesting it.

Circulation of the *Merchandiser* is already under way. The first number described the inauguration of the merchandising campaign, while the second related the experiences of several groups of jobber salesmen who went out into the field to help dealers move their stocks of automotive equipment.

The text book on retailing, which probably will bear the title "A Better Business," will contain information on advertising, display, demonstration and selling automotive equipment. It will be a 32-page book and will be supplied free of charge to dealers who request it of their jobbers or jobber salesmen.

The merchandising department has adopted as its slogan the phrase, "Ask 'Em to Buy," believing that many failures of retailers to move stock and make profits on automotive equipment have been due to lack of aggressive appeal to the automobile owner.

"Ask 'Em to Buy," says the A. E. A. to the thousands of automobile and truck dealers, garagemen and repairmen throughout the country, but the A. E. A. does not stop with this recommendation. Its campaign, undertaken on a permanent basis, proposes to place in the hands of these dealers, many of whom are too pressed for time to investigate the subject on their own account, information which will give them the tools with which to sell. The association will emphasize the necessity of quick turnover in order to make profits and will set forth the various means of attracting interest and inducing purchases by motor car owners.

Sales Possibilities

Director Sherman has visualized the possibilities in automotive equipment merchandising in the following statement:

The possibilities of profits for dealers in the sale of automotive equipment have been found to be quite wonderful through the investigations that have already been made. The sale of a \$10 article every second or third day is conceded not to be a very great increase in business, yet, multiplied by the number of dealers in the United States and Canada, this would add between \$50,000,000 and \$100,000,000 a year to the volume of the industry.

There are about 9,000,000 motor vehicles in the United States and Canada. If to each one of these were sold a bit more than \$100 worth of automotive equipment in the course of a year it would add \$1,000,000,000 to the volume of the dealers' business. Of this billion of business about \$333,000,000 would be profits for dealers. Assuming that there are between 60,000 and 70,000 dealers in the United States and Canada, the added profit for each dealer would be about \$5,000 a year, or about \$100 a week each on an aver-

age. Reduce to daily figures and it amounts to nearly \$20 a day added profit.

Some Sales Pointers

Sales pointers, typical of those to be placed before the trade by the merchandising campaign are contained in the following description of the activities of jobber salesmen who gave personal co-operation during the latter part of the summer to the association's activities:

To determine the possibilities in retail sales lines several salesmen of jobbing houses were selected and were instructed to engage in retail sales to determine what might be done. Realizing that the dealers are very busy at this season and doubtless would have little time to engage in experimentation along sales lines, the jobbing salesmen were instructed not to take up the dealer's time but simply to secure permission to operate in the dealer's place of business.

Permission to Sell at the Curb

One of these salesmen secured the dealer's permission to operate the curb pump for several hours in order that he might study the sales possibilities in the cars that bought gasoline and also that he might, whenever possible, sell merchandise out of the dealer's stock.

Sale of a Spotlight

This salesman, whom we may call Bill, wound the pump handle and found that his first gasoline customer drove an Overland. The owner asked for gasoline and complained that the streets were dark. Here is the story of the sale:

Owner: "Gimme five. Say, these streets around here are dark!"

Bill: "Yes, I guess they are rather dark, but we use a spotlight and don't notice it."

Owner: "Say, you're pretty smooth, aren't you?"

Bill: "Well, it's a fact; let me show you."
BILL SOLD HIM THE SPOTLIGHT.

Sale of a Bumper

After the Overland had pulled out the garage owner went over to a corner and pulled out an old spring bumper, dirty, dusty and the paint half gone. "Bill," he said, "see if you can't sell this thing. I've had it around here for about two years."

The next car that came along had a dented fender. Bill said, "I started to talk the bumper to him. It was pretty old and didn't look very well and the fellow wasn't very enthusiastic about it, but it did fit his car and we could put it on right then, so he took it."

During the remainder of the evening he sold three or four radiator thermometers, some spare fan belts and coils.

Sale of Moto-Meter

The next man that drove up had a new Chandler. Bill pumped his gas and before handing him his change ran his hand over the top of his radiator, which was pretty hot, although not steaming.

Owner: "What's the matter; is she boiling?"

Bill: "No, but she's pretty hot. Why don't you put a Moto-Meter on so you know just what she is doing?"

Owner: "I've had a couple of the things, but someone always steals them."

Bill: "Why don't you put on a lock cap?"

Owner: "Never saw one. What are they?"

Bill (still holding change from the sale of gas): "Just a minute; I'll show you one. (Bill returns with Moto-Meter and lock cap, puts it on machine and hands owner the keys.)

Owner: "Can't you get that off now without the keys?"

Bill: "The firm that makes these will pay \$100 to anyone who can get it off without the key."

Owner: "How much is it?"

Bill: "Seventeen-fifty."

Bill says his eyes popped as though he thought it was a lot of money, but he dug deep and came across.

Sale of \$120 of Equipment

One exceptional case developed. A man with a new Buick, a well-to-do man in the community, purchased \$120 worth of equipment at the same time that he bought gasoline and left the car three hours and a half that the articles might be attached.

Why Sell Automotive Equipment?

Another statement issued by Director Sherman says:

Several reasons have been found for asserting that automotive equipment is a highly desirable form of activity for the dealer. The points, briefly, are:

1—Don't Have to Hunt for Customers

The customers for automotive equipment do not have to be sought. They are already at the door, brought there by their need for gasoline, oil and service. The newspapers each day are filled with the advertisements of firms which have to get out and seek customers. But the automotive equipment buyer is already at the dealer's door.

2—Every Car Owner a Prospect for Something

Every car owner is a prospect for something. There probably isn't a car in the world that would not be a better car if equipped with at least one article. Some of them need several articles.

3—Sales Resistance is Small—For Two Reasons

The sales resistance is small—for two reasons: The usefulness of the article is great and its cost is comparatively small.

4—Stock Costs Little Money

A stock does not run into big money. For less than \$200 a dealer who never has sold automotive equipment can get an initial stock and start to build an automotive equipment department.

5—Seasons Have Little Effect

Seasons do not have an undue effect on sales. In fact, some of the merchandise is designed to fit seasonal needs and the seasons help rather than hinder sales.

6—Goods Always Available

There is seldom any difficulty in securing goods. There are large numbers of jobbers and their salesmen, always in contact with

the dealer, make it possible for him to get what he wants generally within a few hours.

7—Special Salesmen Not Necessary

No staff of special salesmen is required. The mechanics, stenographers and other employees can sell automotive equipment. They can at least, if they can't sell, bring sales opportunities to the attention of someone

10—Profits Are 33 1/3 Per Cent—More Than on Any Other Thing the Dealer Sells

The profits are greater than in any other department of the business. They range from 25 to 50 per cent and will average about 33 1/3. The profit on shop labor is often a few cents or nothing. The profit on cars ranges upward to 25 per cent, which is where automotive equipment begins.

Official Organ of the A. E. A. Campaign

Published Exclusively for
THE SALESMEN OF THE MEMBERS OF THE AUTOMOTIVE EQUIPMENT ASSOCIATION
At 1618 Clay Hall Square Building, Chicago

The Automotive Equipment MERCHANTISER

Volume I—Number 1

RAY W. SHERMAN, Merchandising Director

September 20, 1921

To the Salesmen of the A. E. A.

This is the first number of a publication exclusively for the salesmen of the members of the Automotive Equipment Association.

The salesmen of Automotive Equipment follow a profession that is an occupation all its own. It has its own distinct characteristics. It has developed a class of men who have problems, methods and ideas all their own, and these men are an important factor in the conduct of the automotive equipment industry.

With these peculiar and exclusive characteristics in the work and with the industry seeking ways and means for further development, what is more logical than that an opportunity be provided for these salesmen to discuss their problems on a common meeting ground and consider ways and means for further improving their profession? Hence this publication.

The Automotive Equipment Association is anxious to carry on certain work along merchandising lines. To do that there must be contact of co-workers. The heads of our companies have a common meeting ground in their association meetings and correspondence, but the salesmen are so numerous and scattered that a publication seems the best means for giving the salesmen a common contact in the industry's big plan.

Your comment, favorable or adverse, on this publication is invited.

RAY W. SHERMAN, Merchandising Director, Automotive Equipment Association

The Merchandising Plan of the A. E. A.

THE merchandising plan of the Automotive Equipment Association is one of the greatest movements ever undertaken by any industry. It is the greatest movement ever set in motion in the automotive industry.

The industry has demonstrated its character by building a monumental structure out of an idea in a few brief years and has demonstrated its claim to greatness by climbing from nothing to the second place among the country's finished product industries.

From the day the industry began it has been overcoming resistance and surmount-

ing obstacles. It seldom has had any precedent by which to go. The result has been that it is disposed to disregard precedent and make plans of its own for getting results in its own way.

One set of difficulties gave birth to the Automotive Equipment Association, which has been clambering over obstacles ever since it began. It now proposes to climb over another one, which is the too-slow expansion and growth of the automotive equipment business.

The A. E. A., through its deliberations, arrived at the conclusion that the manufacturers could make more, the jobbers could

job more, the jobber's salesmen could sell more, the dealers could make more profits and the car owner could motor in greater safety, convenience and comfort if there could be a greater movement of merchandise all along the line.

The subject came up for discussion at a convention of the A. E. A. at Mackinac Island in July of this year. Students of the business said it was easy to manufacture more, that it would be easy to job more, that the salesman could load the dealer with more but that all this would be useless unless the dealer could sell more and make a profit in the selling.

The Merchandiser will be sent twice a month to salesmen of members—both manufacturers and jobbers

who can sell. A commission arrangement with all or part of the organization may help.

8—No Great Competition

There is no great competition. In large units of sales, such as cars and trucks, long-time sales work and follow-up is necessary and the competition is keen. In automotive equipment selling there is little long-time work; the fact that a man buys one article does not eliminate him as a customer and expense is not incurred for sales made by a competitor.

9—A Cash Business

It is mostly a cash business—goods and cash being exchanged over the counter. There are no notes or long-time payments.

And is the merchandising idea finding a welcome with dealers? On this subject the campaign director says:

Some jobber salesmen have already made such progress with dealers that the salesmen are being consulted as to how the front of the building should be remodeled, how the stock should be arranged, what show cases and cabinets should be purchased, and what should be done to make the place into a BETTER MERCHANDISING ESTABLISHMENT.

Has the merchandising campaign come into your town?

If it hasn't, better ask your jobber what he is going to do about it.

How to Stage an

ENCLOSED CAR WEEK

In Your Town

THE National Association of Automobile Show and Association Managers has put its influence behind the suggestion for an Enclosed Car Week to help dealers and dealer associations stimulate fall buying of cars—not only enclosed cars but all classes of automobiles.

Kansas City, Detroit, Brooklyn, Syracuse, Buffalo and Rochester, six large cities represented in the association, are going to hold an Enclosed Car Week in October. Others are considering it.

Is YOUR city going to hold one?

Like the proverbial Irishman, you may answer a question with a question—with two of them:

1—What will an Enclosed Car Week do for dealers who hold one?

2—How can dealers stage an Enclosed Car Week?

Let's answer Question No. 1:

The Enclosed Car Week observation, with all its publicity, would help put an end to the after-summer sluggishness of public interest in the automobile.

It would get more people thinking earlier in the fall about automobiles.

It would advance by several weeks the sale of some enclosed cars.

It would get many new enclosed cars on the highways in October instead of November, creating public interest and thought and giving dealers just so many more weeks to promote the enclosed car as a super-car for fall and winter and as the all-season car.

And now let's answer Question No. 2:

1—Get the dealers of your community to get together at a lunch or other sort of meeting and explain the idea of the Enclosed Car Week and its possibilities.

2—If the holding of a week is approved, decide on an appropriation for the co-operative work, including advertising and other forms of promotion. An assessment of at least \$50 a dealer probably will be necessary. In some cities where a week has been held with considerable success the cost ranged about \$100 per dealer. In some cases this was handled by assessing the participating dealers \$50 each and taking the balance from the dealer association treasury. In other

cases the assessment per dealer was larger and a smaller amount was taken from the treasury. As an instance, in Brooklyn, N. Y., where 26 dealers co-operated last year in an Enclosed Car Week, the total cost of promotion was \$2,600, half of which was taken from the treasury, while the dealers shared the other half.

3—Fix the date for the observance, preferably beginning and ending on Saturday.

4—Decide on the forms of promotion. Here are some which might be applied:

(a) Co-operative advertising with the names of participating dealers and the cars they sell on ads large enough to allow this much detail. Advertising can include newspaper space, car cards, window cards, both for dealer establishments and for stores generally which will use them, etc. There should also be a committee of dealers to get the news story of the week properly before the editorial departments of the newspapers.

(b) A parade can be held of the latest models of enclosed cars of the participating dealers, this parade headed by a band proceeding through the principal streets on the afternoon of the opening Saturday.

(c) One interesting form of promotion is a general price list of all the models of enclosed cars shown by each dealer. The cost of printing can be financed by a charge to dealers or copies of the cards distributed.

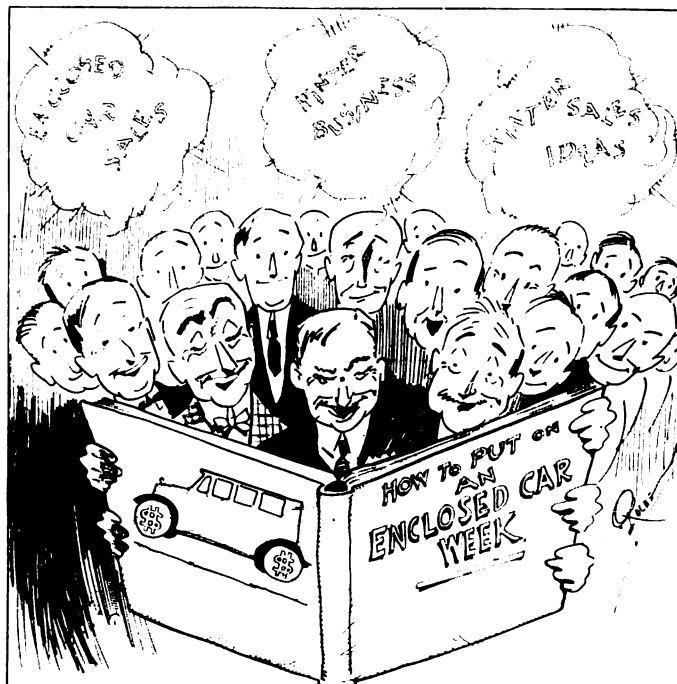
(d) Free transportation between different salesrooms for people not owning cars or not using them during Enclosed Car Week.

Enclosed Car Week.

(e) Get the co-operation of the police to rope off certain streets so that traffic will be diverted along Motor Row or the two or three streets, if there is more than one, particularly devoted to automobile salesmanship.

5—Convince each dealer participating in the week that it will be to his advantage to go to some expense and considerable effort to make an effective display in his own salesroom of his line or lines of enclosed cars. There is opportunity for much variety in these individual salesroom displays.

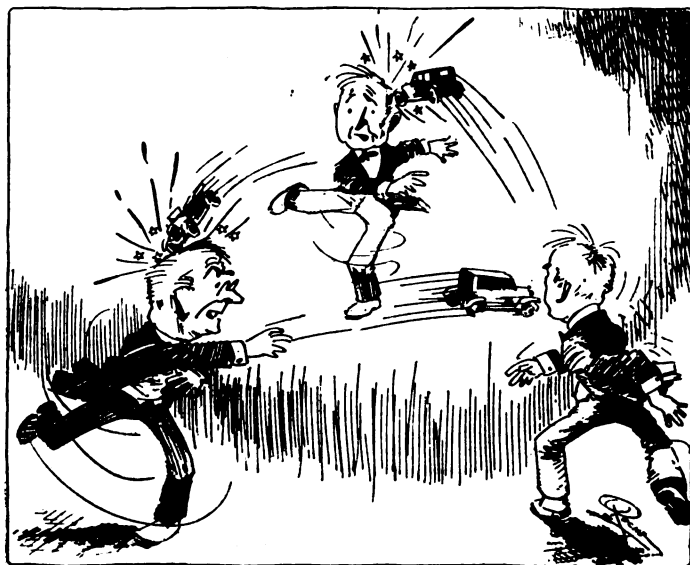
6—There is opportunity also for individual advertising of the idea in addition to that handled by the dealer association.



Hit Him or Help Him

Reilly Talks About Dealer
Cooperation and Used Cars

By NEAL ADAIR



"SUBSTITUTE for the fatted calf," Reilly remarked, passing across his desk to Raley a box filled with cigars of abundant waist measurement and amazing length.

"Private stock?" Raley queried.

"Very private," was the reply. "Designed and built exclusively for you and me, though sometimes I let the Old Man horn in on the package when he comes down from the factory—providing he isn't giving me too many or too few cars just about then."

For be it known that it was always a very special occasion in the establishment of C. J. Reilly, Inc., when Raley of Calverton paid his semi-annual visit. James Raley was the Raley of Reilly & Raley, recalled by Callawassa folks whose memories reached back to two-cylinder days. Ever since Raley had gone to Calverton, to dot the landscape with Sennett cars almost as copiously as Reilly had scattered them about the Callawassa territory, the one time partners had made their twice-a-year get-together an institution. And Reilly was always host—Raley came to sit at the feet of longer experience and re-learn some of the things he had learned in those days when you ran to the newspaper office with the biggest story of the day every time one of your cars made a twenty mile trip without stopping.

The former partners communed for awhile, as old friends can commune without resort to language, in the thickening haze puffed from their husky perfectos. Finally Raley waved a swath through the smoke cloud and started the conversation.

"Cornelius," he said, "I'm getting fed up on this job you wished on me a couple of years ago, domestic-nursing our Calverton Trade Association."

"H'm," Reilly commented, "and what about the patient. All well, I suppose; don't need a nurse any more, what?"

Raley leaned forward. "Well? It's sick, Cornelius, that's what it is, sick, and I'm sick, too, sick of calling meetings that don't draw enough attendance to make up a coroner's jury, sick of cooking up new schemes for the secretary to use in getting these birds on the membership roll to pay their dues; sick of the whole darned thing."

"Sick patient, sick nurse—nice, cheerful outlook," Reilly commented.

"Well, I didn't run for the presi-

dency," Raley countered in self-defense. "The presidency ran for me and—and—it got me, with your assistance."

"Don't get excited, Jim; help yourself to the ice water," said Reilly, pushing a desk carafe toward him. "Of course you didn't run for the presidency, but you're president just the same and I'll say he's a bum president who lets a trade association die on his hands."

"But if you can't get 'em interested—" Raley began.

"Can't?" Reilly interrupted. "Jim, did you ever hear of that word back in the days—God bless 'em, and curse 'em—when those old two-lungers used to spit and cough and sit down on their hind legs with a prospect on the cushion beside you? Can't? Why you sold cars—in those days. What's running an association compared to that?"

Raley pondered. "Not so much, maybe," he replied, "but what would you do—right now?"

"What needs to be done most, to make business pleasant and profitable? Having any trouble about—used cars, for instance?" Reilly asked with a grin.

"No trouble, no trouble at all," Raley answered grandly. "Why the foolish question?"

"I was just thinking," said Reilly, "that you might be interested in a little plan we're trying out here in Callawassa."

"Not having anything else to do, I might listen to the story," Raley ventured.

"It isn't so much of a story," Reilly went on, "but it is a story. We never had anything but Tom's, Dick's and Harry's say-so about local values—prices cars were bringing right here in Callawassa. So we got together in the association and decided to get out a monthly report of the prices obtained for used cars of various makes and models sold by our members. The process is just this: Each dealer, when he closes his books at the end of the month, sends to the secretary immediately a list of cars sold and what they brought. This information, gathered from all the members, is classified and put into print, without the dealers' names, of course, as fast as the fastest print shop in town can do the

job and mailed to members.

"But that, what good does that do?" Raley inquired. "That doesn't prevent Smith from allowing \$1000 on a Sennett that's worth \$600, does it? That doesn't prevent him cheating you out of a resale, does it?"

"Of course it doesn't," Reilly agreed, "and I don't know of anything or anybody—but the sheriff—that will."

"But, Jim, our dealers and your dealers aren't all like that. Most of them are business men. Most of them think—some of them harder and oftener than we always give them credit for. And this monthly report, though it doesn't bind anybody to do or not do anything, puts accurate information about values of used cars in Callawassa, values that the buyers of these cars recognize, in the hands of Callawassa dealers. Some of them, maybe, but not all of them are going to go on, month after month, ignoring these regular reminders of what cars will bring. We still have wild trades to contend with, but they are not so numerous as they were and I think they will become fewer and fewer every month. It's a stabilizer, this monthly used car bulletin of ours, and we're going on with it until somebody thinks of something better."

Raley made another raid on the private stock, fired up and blew a ring that hung for a moment like a halo over Reilly's head. "Sick patient, sick nurse—sick association, sick president," he murmured. "Cornelius, you're a grand M.D. And association—it's a grand thing, isn't it?"

"Yep," replied Reilly. "You know Harder, my strongest competitor? Great scrapper—expect if he's around he'll bring in a minority report when the world comes to an end. He fought this used car bulletin at first, for awhile wouldn't send in his figures, then for awhile sent in fake figures, but now—"

"It's the old story of co-operation, Jim. Harder would give me anything he's got now, except maybe the keys to his cellar. . . . And I guess he'd give me those—if I'd give him mine."



Dollar Ideas

Earn a Dollar

MOTOR WORLD will pay \$1 each for ideas for this department. The ideas should have to do with sales and business management. The idea should be in two parts:

- 1—The problem.
- 2—The solution.

But if you'll get the idea on paper in any fashion whatsoever, we shall be glad to shape it up for you. Do two things:

- 1—Help some other man.
- 2—Make a dollar for yourself.

Foot Rules Showing Car Dimensions Used in Display

A CLEVELAND dealer in a popular-priced "six" has a new car sales promotion plan which makes use of a number of folding and one-piece rules. It is a display idea, featured in connection with a demonstrator in the center of the display window. A 12-in. rule wired to the bottom of the front axle shows the clearance to the floor as 10½ in. Another on the rear axle shows 11 in. clearance. One on the flywheel housing measures 13 in. to the floor. Two more folding rules and three small 3-in. sections are fastened to show the 39-in. by 2-in. front springs, with 1¼-in.

snubbers, and the 51-in. by 2-in. cantilever rear springs. Three additional folding rules and a couple of short sections are placed where they indicate

come in and personally verify the measurements listed and compare strength, comfort, safety and balance factors indicated with those of any other cars. The frankness and novelty of the appeal were directly responsible for inquiries which led to several sales, according to Albert Hess, the dealer who devised the plan.

How One Dealer Overcame Credit Difficulties

LACK of credit has prevented thousands of cars from being sold. Here is how one dealer in the capital city of a Middle Western State got the best of the situation. He made two sales to farmers but the farmers could not get bank loans for the balance on the cars so this live dealer hunted out city dwellers who had retired from that neighborhood and got them to loan to their former neighbors who desired to buy cars and, incidentally, he called their attention to the difference in income between 3½ per cent and 8 per cent. When the retired farmer drew his money from the bank to make the loan, the banker learned its purpose and protested in vain. As the banker did not want the citizens with surplus cash to learn the difference in income between 3½ and 8 per cent, he called the dealer in and informed him that the bank would gladly loan to all his customers. Of course, the banker did not mention the fact that the bank would make 4½ per cent more by loaning the money from the bank and the dealer did not call his attention to that fact. The dealer had overcome his greatest obstacle to sales and was satisfied.

How Many Miles per Gallon?

A DEVICE for demonstrating the fuel economy of the new single six is being used by Packard dealers. It consists of a cylindrical glass jar which is mounted by brackets near the windshield and connected by a copper pipe with the



Auxiliary gasoline tank for tests

carburetor. The regular connection between the carburetor and the gas tank is disconnected and the connection with the glass jar substituted. Gasoline is put in the glass jar and runs by force of gravity to the carburetor.

When a demonstration of fuel economy is to be made, the gasoline is carefully measured and put in the glass jar. The reading of the speedometer is noted and everything is ready. The car is then driven away wherever the person receiving the demonstration desires. As the car travels the gasoline can be seen slowly disappearing from the glass jar. By checking up the reading of the speedometer the mileage per gallon is easily obtained. This answers the question of how many miles per gallon in an interesting manner.

A "Statement" That Pleases Customers

STATEMENT	
A. J. PICARD & CO. INC.	
WHOLESALE DISTRIBUTORS	
AUTOMOTIVE ACCESSORIES	
TUNING & ELECTRICAL SPECIALTIES	
314 N. STREET AT BROADWAY	
NEW YORK	
JUNE 1st, 1921	
CABLE ADDRESS: PICARD, NEW YORK	
BALANCE DUE	
You don't owe us a dollar. We wish you did!	
TUNE IN DAVIS SET	

In taking monthly statements off the ledger, A. J. Picard & Co., Inc., New York automotive equipment jobber, doesn't overlook the opportunity of keeping in touch with customers, even if no balance is shown in their accounts. Customers that don't owe Picard anything get a statement just the same, only it reads: "You don't owe us a dollar; we wish you did."

front and rear seat cushion depth and width and door dimensions. A floorboard is removed to show 6-in. frame depth by placing a rule over same. Another section measures the 2½-in. wide external brake band. The rules have large, clear-figured scales, and their total cost was \$3.60. Eight dollars was paid for a 3-ft. by 4-ft. hand-lettered cardboard sign, inviting the public to

How to Spot Motorist Who Neglects Oiling

THE motorist who neglects lubrication of his car is easy to "spot" according to Herbert Brownlee of the Saffold Garage, Cleveland. When a car shows grease and oil cups coated with road dirt, or loosened, damaged or missing, it is a good time to inform the owner about weekly, semi-weekly, or daily lubricating service offered by the garage. And often it is possible to get an order to replace the original cups with ones of modern design. Or if a chronic squeak or rattle has developed, as in a spring bolt or steering knuckle pin, there is opportunity to explain, from a sample, how an oilless bushing, used for replacement, would make further trouble impossible. Brownlee finds that such efforts aid income from the accessories, installation, routine lubricating service—and good will.

Calls for and Delivers Washing Jobs

AN Indiana car dealer has worked up a big business in washing cars by going after cars to be washed and delivering them, without charging anything extra for this service. Also he has used the telephone extensively in working up business. He makes a practice, each week, of calling up thirty or forty new people in his neighborhood to ask them whether or not they wouldn't like to have him call for their cars and then wash and deliver them. He secures the names of car owners in his neighborhood by inquiring of all patrons of the names of friends or relatives in his neighborhood who own cars, and by co-operating with the nearby druggist and nearby grocer in obtaining car owners' names from them.

Sells Luggage Carriers at the Gasoline Pump

A GASOLINE filling station, not operated as a chain of one of the large oil companies in Columbus, has a novel plan of selling collapsible luggage carriers. The location of this filling station is on the main road of travel between the East and the West, and a large number of tourists stop for filling. When the proprietor sees that the luggage is scattered over the running boards in a haphazard manner, he suggests the luggage carrier and brings out a size to fit the car. In a large majority of cases a sale has resulted from this procedure.

Money Back Policy Sells Used Cars

THE Peacock Companies, Chandler and Cleveland Six distributors in San Francisco, are meeting with success in moving their used cars by a "money-back" plan, devised by E. L. Peacock, president of the organizations. By this plan the buyer of a used car from this firm can take it out, use it four or five

days, and, if not perfectly satisfied with his "buy," return it and get his money back, without any argument. The dealer thus takes a practical stand back of every used car he sells. The plan, widely advertised in the newspapers, has helped

Going After Chain Repair Work Now

A COLUMBUS repair proprietor who also operates a garage has started a campaign to repair chains and other

An Idea for the Motor Truck Salesroom Window



This display was made recently in the window of the Heller Sales Co., Wilkes-Barre, distributors for Commerce trucks. The idea was to impress upon the truck trade that it might have ten months' time to make payment. It sold four trucks for this dealer in one week and in addition about \$500 worth of parts to customers who were attracted by it. The scale was painted in water colors on the inside of the window

materially in the movement of used cars from the Peacock salesrooms.

How One Distributor Builds Good Will

H. L. ARNOLD, distributor for the Hudson and Essex in California, Nevada and Arizona, has introduced a new dealer co-operative feature which is proving of importance in advancing the interests of the dealers throughout this territory. Arnold is sending a mechanical expert into each dealer's territory to see every Essex owner, go over his car, make such adjustments as may be necessary, and coach the owner in getting the most possible out of the car. This is done without charge.

winter equipment by placing a sign prominently in his garage calling attention to the necessity of having chains repaired for instant use. The owner is warned that he can not tell when his chains will be absolutely necessary, and as a result he should have them repaired and put in first class condition.

Free Parking Space Brings Business

THIS summer an Indiana automobile dealer made a big hit with motorists by renting a vacant lot near his place of business and by not only letting folks park free in this lot but by also keeping the cars safe for them by a tag system. It brought him much extra business.

NEW YORK SERVICE MEN IN DRIVE TO AVERT WINTER SLUMP

**Plan to Spend \$16,000 in Co-operative Advertising
Through Newspapers and Circulars During October and
November—Seek to Bring Repair Business into Shops
in the Early Winter**

NEW YORK, Sept. 22.

AUTOMOTIVE service associations of New York and Brooklyn are preparing to spend \$16,000 on an advertising and direct mail campaign to avert the usual slump in winter automobile repair work. The appeal will be carried to the car owner to have the overhauling work which usually is put off until early spring done during the winter.

By appealing to the car owners in this way the associations believe that they will be able to bring to their members sufficient work to keep the wheels turning and the organizations intact throughout the dull period.

Brooklyn started the movement a few weeks ago and mapped out the plan. An initial appropriation of \$4,000, to be secured through voluntary subscriptions of members, was made. New York joined the movement to-day with a \$12,000 appropriation.

The plan is to use quarter-page advertisements in several daily newspapers, some morning and some evening, spreading these out so that every other day or every third day during the months of October and November one paper will carry the advertisement. This advertisement will be attractively gotten up by an advertising agency and will have cuts at head and foot. No individual names will appear in this advertising, but the signature will be that of the association. The copy will be prepared especially to get the interest of the car owner and set him to thinking of the advisability of having his work done early. To follow this up and clinch the argument, there will be some 50,000 folders printed in two colors, also bearing the emblem of the service association, but with the name and address of the firm who has subscribed to the fund. This folder sets out three very forcible reasons why it is to the advantage of the car owner to have his work done NOW. The copy in the folder logically follows up the newspaper copy and focuses the appeal of the reading matter on the individual firm.

The benefits of this campaign are many. In the first place, the service

associations are brought forcibly to the attention of the car owning public, many of whom are ignorant of the existence of these organizations. The use of quarter pages spread over the various newspapers makes it almost impossible that any car owner in the territory can fail to see at least one of the advertisements during the ten weeks that the campaign will run. Even if the car owner should by chance fail to see these, he is still caught in the mailing lists, because practically every established service station and repair shop will send folders to car owners on their lists. The advertising in the newspapers, therefore, serves as an opening wedge and gets interest. The folder follows and puts in concrete form what was covered more generally in the advertising.

The financial arrangements are such that the fund will be raised by subscriptions of \$100 each. Of this amount, \$25 will be paid on the signing of the contract and the balance in installments covering the ten weeks that the campaign will run. The associations will, therefore, have at all times money in their treasuries from the subscribers in advance of the time that the money will be needed.

Subscribers to the fund will get the general advantage of the newspaper advertising and have their names printed on the folders. Non-subscribers to the fund, who are members of the associations, will, of course, derive some benefit from the advertising, but they will not be able to follow it up. The prestige of the associations will be advanced and membership in them will, therefore, become more valuable.

While the idea is scarcely more than two weeks old and work has only been in actual progress a few days, subscriptions are already coming in fast and there is no doubt but that the plan will go through with a rush. Already plans are being made to induce other associations in other parts of the country to promote similar campaigns which will doubtless result in a decided increase in repair business in those localities. It is quite possible that as the movement gains headway national organizations

will find it to their advantage to promote the idea, and the increase in service work will be felt all along the line, in the consumption of parts, accessories, tools and supplies.

Another desirable feature is that with the picking up of business in the ordinary dull period, many skilled men can be retained in the employ of firms who would be otherwise unable to keep their staffs up to normal. When laid off, these men drift from city to city and locate wherever they can find work, and the result has always been that when the spring rush starts, it is impossible to get the workmen, and often shops have to be manned with green hands, which results in confusion in the shop, delay in deliveries and unsatisfactory work which has to be turned back to the shop to make good.

The campaign in Brooklyn is in full swing and the campaign in New York has just started. Forty teams of two men each are visiting responsible firms and asking for their subscriptions, carrying with them samples of the advertisements and folders. The first half hour of the drive resulted in six subscriptions, so the plan is evidently being favorably received.

Never before has anything just like this been attempted in the automobile business, although it has been successfully carried out in other lines of business. Coffee growers are at the present time carrying space in dailies urging the public to drink coffee. Not some particular kind of coffee, but just coffee. We see in the street cars the slogan "Wear suspenders." No particular brand of suspenders, but just suspenders. The anthracite coal operators are running space attempting to justify themselves in the minds of the public for the seeming high prices of coal. And so it goes. Why not advertise automobile service? It has never been done before collectively and it seems certain that this initial trial will result successfully. In another year the movement will no doubt have gained momentum and will receive more widespread support, and may become a national campaign backed up in many other ways.

LETTERS *from* READERS

A Jobber Talks to His Dealers

IN the following letter, written to the trade by McCauley-Ward Motor Supply Co., Waco, is a straight-from-the-shoulder talk on some business fundamentals that many of us have forgotten in our daily attention to the details of business. It "takes them off the shelf and dusts them off" in a way that is impressive, and it is printed with the view of giving all the garagemen and dealers the opportunity of reading a letter which otherwise would exert an influence only confined to this jobber's dealers.

Dear Sir:

This is not an advertisement in any sense of the word; but rather an informal chat with you.

The automotive equipment business, all the way from factory to consumer, rests upon a few well-known principles; not new principles, mind you, but old ones—as old as the hills but sometimes they are forgotten. The purpose of this letter is to bring them out, dust them off a bit, and submit them once more for your consideration—and mine.

The repair shop should be used as a preventative rather than a cure. When a repair man takes for his motto, "I keep your car on the road," rather than, "I keep your car in my repair shop," he is on the high road to success.

We have learned that when we visit the dentist twice a year, for the purpose of having our teeth cleaned and examined and any small cavities filled, we save money and time and pain. If we can educate the car owner to give his car the same consideration, he will have fewer breakdowns, smaller bills to pay, and his car will last him a longer period of time.

One way to accomplish this is to fasten to the dash in front of the driver a tag showing what the speedometer reading will be when the car is due for an inspection; and a suggestion that it be brought in at that time.

This is the first principle; that the owner should regard the shop as a preventative rather than a cure. And now for the second.

A prominent manufacturer recently drove a Marmon on a trip to Florida. He called upon fifty dealers and bought oil and gasoline. He gave the dealers an opportunity to sell him something else but not one asked him.

He then made a trip through a western State in an Overland. Again he called upon fifty dealers and bought oil and gasoline and gave them opportunity

to sell him something else. Not one took any advantage of the opportunity.

Then he made a trip through Ohio in a Ford. And again he called upon fifty dealers and gave them opportunity to sell him some supplies. Not one tried it.

The sales talk of many of these dealers seemed to be, "Is that all?"

The grocery salesman, the dry goods salesman, the boot and shoe salesman, show their lines and suggest goods that a purchaser might need—and buy. But many of us do not.

The second principle, then, is that we can increase our sales and without boring anybody, by adopting a more aggressive sales policy.

And now for the third.

Unfortunately, some of the public in the form of Mr. Carowner, does not place very much faith in the ability of the average garage to make repairs, or in the ability of the average garage mechanic.

This may be due to two reasons: First, that the average car owner is not mechanically inclined, and therefore does not understand either his car or the mechanic working on it; and second, a large number of garages have at times overcharged and underserved the car owner.

The result is that when Mr. Carowner takes his car in for inspection or repair, he feels that he is going to be stung.

This is due to lack of confidence.

And this confidence can be restored by every shop owner and by every mechanic if all will simply follow the Golden Rule: Do unto others as you would be done by. Nothing ever better than this has been devised for the conduct of business.

Honesty and efficiency are big words and mean much. And every man, you and I and Tom and Harry, know just where we are shy when our conduct is checked against these words.

No one gets rich on one job. It is the satisfied customer who comes back, and on the way tells his friends, that makes it possible for us to pay expenses and to make a living.

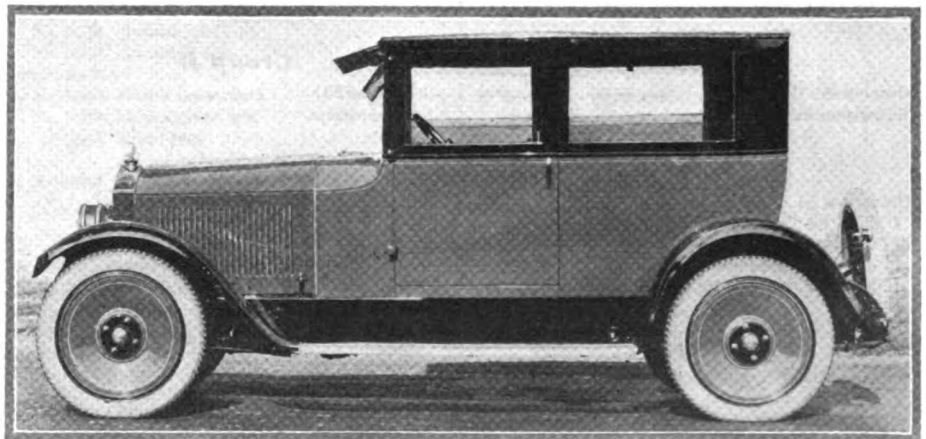
The boss who is tricky, who is willing to stick up the tourist because he is a tourist, cannot expect to have an honest shop. His employees will follow quickly in his footsteps. The boss who is honest, who applies the Golden Rule every minute of the day, will have only honest workers; the dishonest ones won't stick around for they will feel out of place.

The third principle, then, is to restore confidence with Mr. Carowner by a generous and liberal application of the Golden Rule.

Now, I've just taken these three principles from the shelf, dusted them off and cleaned them up a bit.

If you think of some that I have overlooked, write me about them. I'll not use your name if you do not wish it.

Moon Has a New Body; a Brougham at \$2785



An entirely new body is now being fitted to the Moon 6-48 chassis, this known as the Brougham or Petit Sedan, the price being \$2,785. The outstanding features are the appointments, the wide doors and the adjustable sliding front seats. These two seats are of the bucket type and the driver's seat can be moved forward or backward a distance of 2 in. to accommodate the leg length of the driver. The other front seat is movable sideways so that it can either rest against the driver's seat or against the door, in which case there is a 12-in. aisle between the seats. The backs of both front seats tilt forward. The chassis specifications remain exactly as in the other models.

A Department of
BETTER MECHANICS

Conducted by J. HOWARD PILE

No. 210

When asking for information, please state whether you maintain a permanent file of Motor World, as many inquiries are answered by reference to previous issues

Time Estimates on Studebaker Repair Operations

Factory Has Worked Out a Complete System Which Makes It Possible to Estimate on Time and Parts Both

Part III (Concluded)—List of Parts Needed for Each Operation

List of Parts for Combined Operations

SERIES 19 FOUR	SERIES 19-20 LIGHT & SPECIAL SIX	SERIES 19-20 BIG SIX
<p style="text-align: center;">Group A</p> <p>OPERATIONS 1-3-5</p> <p>2 No. 32021 Steering knuckle pins. 2 No. 31988 Fr. axle upper bushing. 2 No. 31990 Fr. axle lower bushing. 2 No. 32008 Cross tube clevis bolt. 2 No. 32085 Steering knuckle arm bushing.</p> <p style="text-align: center;">Group B</p> <p>OPERATIONS 2-11 No parts required.</p> <p style="text-align: center;">Group C</p> <p>OPERATIONS 2-4</p> <p>1 No. 31908 Internal brake band lining. 24 No. 35620 Rivets. 1 No. 14554 Brake release bracket screw. 1 No. 14555 Brake release bracket screw nut.</p> <p style="text-align: center;">Group F</p> <p>OPERATIONS 7-3-9</p> <p>1 No. 32314 Front spring. 1 No. 32323 Front spring bolt. 2 No. 6x43 Cotter keys. 2 No. 6x45 Cotter keys. 4 No. 6x43 Cotter keys.</p> <p>OPERATIONS 8-3-9</p> <p>1 No. 32325 Rear spring. 1 No. 32953 Rear spring rear bolt. 2 No. 6x43 Cotter keys. 2 No. 6x45 Cotter keys. 4 No. 6x48 Cotter keys.</p>	<p style="text-align: center;">Group A</p> <p>OPERATIONS 1-2-3-5</p> <p>2 No. 32022 Steering knuckle pins. 2 No. 31989 Fr. axle upper bushing. 2 No. 31991 Fr. axle lower bushing. 2 No. 32009 Cross tube clevis bolt. 2 No. 32037 Steering knuckle arm bushing.</p> <p style="text-align: center;">Group B</p> <p>OPERATIONS 2-11 No parts required.</p> <p style="text-align: center;">Group C</p> <p>OPERATIONS 2-4</p> <p>1 No. 31909 Internal brake band lining. 26 No. 35620 Rivets. 1 No. 14554 Brake release bracket screw. 1 No. 14555 Brake release bracket screw nut.</p> <p style="text-align: center;">Group F</p> <p>OPERATIONS 7-3-9</p> <p>1 No. 32915 Front spring. 1 No. 32955 Front spring bolt. 2 No. 6x43 Cotter keys. 2 No. 6x45 Cotter keys. 4 No. 6x43 Cotter keys.</p> <p>OPERATIONS 8-3-9</p> <p>1 No. 32327 Rear spring. 1 No. 32954 Rear spring rear bolt. 2 No. 6x43 Cotter keys. 2 No. 6x45 Cotter keys. 4 No. 6x43 Cotter keys.</p>	<p style="text-align: center;">Group A</p> <p>OPERATIONS 1-2-3-5</p> <p>2 No. 32022 Steering knuckle pins. 2 No. 31989 Fr. axle upper bushing. 2 No. 31991 Fr. axle lower bushing. 2 No. 32009 Cross tube clevis bolt. 2 No. 32037 Steering knuckle arm bushing.</p> <p style="text-align: center;">Group B</p> <p>OPERATIONS 2-11 No parts required.</p> <p style="text-align: center;">Group C</p> <p>OPERATIONS 2-4</p> <p>1 No. 31909 Internal brake band lining. 26 No. 35620 Rivets. 1 No. 14554 Brake release bracket screw. 1 No. 14555 Brake release bracket screw nut.</p> <p style="text-align: center;">Group F</p> <p>OPERATIONS 7-3-9</p> <p>1 No. 32915 Front spring. 1 No. 32955 Front spring bolt. 2 No. 6x43 Cotter keys. 2 No. 6x45 Cotter keys. 4 No. 6x43 Cotter keys.</p> <p>OPERATIONS 8-3-9</p> <p>1 No. 32326 Rear spring. 1 No. 32954 Rear spring rear bolt. 2 No. 6x43 Cotter keys. 2 No. 6x45 Cotter keys. 4 No. 6x43 Cotter keys.</p>

List of Parts for Combined Operations

SERIES 19 FOUR	SERIES 19-20 LIGHT & SPECIAL SIX	SERIES 19-20 BIG SIX
<p>Group G</p> <p>OPERATIONS 1-2</p> <p>1 No. 32254 Clutch facing. 12 No. 75x10 Facing rivets. 1 No. 32279 Clutch shifter bearing. 1 No. 32292 Oil washer.</p> <p>OPERATIONS 3-4</p> <p>1 No. 35562 Clutch brake arm facing. 2 No. 46x3 Clutch brake arm facing rivets. 1 No. 17704 Clutch brake arm spring.</p> <p>Group H</p> <p>OPERATIONS 1-3-10</p> <p>1 No. 17408 Radiator inlet hose. 1 No. 16877 Water pump outlet hose. 1 No. 36235 Top radiator hose.</p> <p>Group L</p> <p>OPERATIONS 1-3</p> <p>1 No. 30378 Generator complete. 4 No. 17794 Rubber bumper for coupling.</p> <p>OPERATIONS 2-3</p> <p>4 No. 17794 Rubber bumper for coupling. 2 No. 17792 Couplings.</p> <p>OPERATIONS 4-6</p> <p>1 No. 19099 Generator armature complete. 2 No. 19086 Carbon brushes. 1 No. 12154 Generator bearing, upper.</p> <p>OPERATIONS 5-10</p> <p>4 No. 19086 Carbon brushes.</p> <p>OPERATIONS 6-7</p> <p>1 No. 12154 Generator bearing, upper. 1 No. 15854 Generator bearing, lower.</p> <p>OPERATIONS 7-4</p> <p>1 No. 15854 Generator bearing, lower. 1 No. 19099 Generator armature complete. 2 No. 19086 Carbon brushes.</p> <p>Group M</p> <p>OPERATIONS 1-3</p> <p>1 No. 19837 Dist. contact arm to point. 1 No. 21383 Dist. timer adj. screw with point.</p> <p>Group N</p> <p>OPERATIONS 23-24</p> <p>1 No. 16726 Cam shaft gear. 1 No. 16919 Motor gear case cover gasket. 1 No. 16922 Gear cover small gasket. 1 No. 17408 Radiator inlet hose. 1 No. 16706 Crankshaft gear.</p> <p>OPERATIONS 21-40</p> <p>1 No. 32634 Oil pan gasket, right. 1 No. 32636 Oil pan gasket, left. 16 6x15 Cotter keys. 1 gal. motor oil. 1 No. 16910 Center and rear center lower brg.</p> <p>Group P</p> <p>OPERATIONS 1-6</p> <p>1 No. 30669 Oil pressure gauge. 1 No. 24231 Oil pump body gasket. 1 No. 32634 Oil pan gasket, right. 1 No. 32636 Oil pan gasket, left. 1 gal. motor oil.</p> <p>Group Q</p> <p>OPERATIONS 1-2</p> <p>8 No. 32206 Universal joint cross bushing. 8 No. 32214 Universal joint cross bushing lock wire. 2 No. 32218 Universal joint yoke dust washer.</p> <p>OPERATIONS 3-4</p> <p>1 No. 32203 Universal joint cross. 8 No. 32214 Lock wires. 2 No. 32218 U. J. yoke dust washer. 1 No. 32269 Front universal joint yoke.</p>	<p>Group G</p> <p>OPERATIONS 1-2</p> <p>1 No. 9598 Clutch cone facing. 12 No. 75x10 Facing rivets. 1 No. 32280 Clutch shifter bearing. 1 No. 32287 Oil washer.</p> <p>OPERATIONS 3-4</p> <p>1 No. 35562 Clutch brake arm facing. 2 No. 46x3 Clutch brake arm facing rivets. 1 No. 17704 Clutch brake arm spring.</p> <p>Group H</p> <p>OPERATIONS 1-2-10</p> <p>1 No. 32716 Radiator inlet hose. 1 No. 16877 Water pump outlet hose. 1 No. 36235 Top radiator hose.</p> <p>Group L</p> <p>OPERATIONS 1-2</p> <p>1 No. 30378 Generator complete. 4 No. 17794 Rubber bumper for coupling.</p> <p>OPERATIONS 2-3</p> <p>4 No. 17794 Rubber bumper for coupling. 2 No. 17792 Couplings.</p> <p>OPERATIONS 4-6</p> <p>1 No. 19099 Generator armature complete. 2 No. 19086 Carbon brushes. 1 No. 12154 Generator bearing, upper.</p> <p>OPERATIONS 5-10</p> <p>4 No. 19086 Carbon brushes.</p> <p>OPERATIONS 6-7</p> <p>1 No. 12154 Generator bearing, upper. 1 No. 15854 Generator bearing, lower.</p> <p>OPERATIONS 7-4</p> <p>1 No. 15854 Generator bearing, lower. 1 No. 19099 Generator armature complete. 2 No. 19086 Carbon brushes.</p> <p>Group M</p> <p>OPERATIONS 1-2</p> <p>1 No. 19837 Dist. contact arm to point. 1 No. 21383 Dist. timer adj. screw with point.</p> <p>Group N</p> <p>OPERATIONS 23-24</p> <p>1 No. 16726 Cam shaft gear. 1 No. 16919 Motor gear case cover gasket. 1 No. 16922 Gear cover small gasket. 1 No. 32716 Radiator inlet hose. 1 No. 16706 Crankshaft gear.</p> <p>OPERATIONS 21-40</p> <p>1 No. 32635 Oil pan gasket, right. 1 No. 32637 Oil pan gasket, left. 24 6x15 Cotter keys. 1½ gal. motor oil. 2 No. 16910 Center and rear center lower brg.</p> <p>Group P</p> <p>OPERATIONS 1-6</p> <p>1 No. 32703 Oil pressure gauge. 1 No. 24231 Oil pump body gasket. 1 No. 32635 Oil pan gasket, right. 1 No. 32637 Oil pan gasket, left. 1½ gal. motor oil.</p> <p>Group Q</p> <p>OPERATIONS 1-2</p> <p>8 No. 32210 Universal joint cross bushing. 8 No. 32217 Universal joint cross bushing lock wire. 2 No. 32219 Universal joint yoke dust washer.</p> <p>OPERATIONS 3-4</p> <p>1 No. 32204 Universal joint cross. 8 No. 32217 Lock wires. 2 No. 32219 U. J. yoke dust washer. 1 No. 32270 Front universal joint yoke.</p>	<p>Group G</p> <p>OPERATIONS 1-2</p> <p>1 No. 9598 Clutch cone facing. 12 No. 75x10 Facing rivets. 1 No. 32280 Clutch shifter bearing. 1 No. 32287 Oil washer.</p> <p>OPERATIONS 3-4</p> <p>1 No. 35562 Clutch brake arm facing. 2 No. 46x3 Clutch brake arm facing rivets. 1 No. 17704 Clutch brake arm spring.</p> <p>Group H</p> <p>OPERATIONS 1-2-10</p> <p>1 No. 17408 Radiator inlet hose. 1 No. 16877 Water pump outlet hose. 1 No. 36235 Top radiator hose.</p> <p>Group L</p> <p>OPERATIONS 1-2</p> <p>1 No. 30378 Generator complete. 4 No. 17794 Rubber bumper for coupling.</p> <p>OPERATIONS 2-3</p> <p>4 No. 17794 Rubber bumper for coupling. 2 No. 17792 Couplings.</p> <p>OPERATIONS 4-6</p> <p>1 No. 19099 Generator armature complete. 2 No. 19086 Carbon brushes. 1 No. 12154 Generator bearing, upper.</p> <p>OPERATIONS 5-10</p> <p>4 No. 19086 Carbon brushes.</p> <p>OPERATIONS 6-7</p> <p>1 No. 12154 Generator bearing, upper. 1 No. 15854 Generator bearing, lower.</p> <p>OPERATIONS 7-4</p> <p>1 No. 15854 Generator bearing, lower. 1 No. 19099 Generator armature complete. 2 No. 19086 Carbon brushes.</p> <p>Group M</p> <p>OPERATIONS 1-2</p> <p>1 No. 19837 Dist. contact arm to point. 1 No. 21383 Dist. timer adj. screw with point.</p> <p>Group N</p> <p>OPERATIONS 23-24</p> <p>1 No. 16726 Cam shaft gear. 1 No. 16919 Motor gear case cover gasket. 1 No. 16922 Gear cover small gasket. 1 No. 17408 Radiator inlet hose. 1 No. 16706 Crankshaft gear.</p> <p>OPERATIONS 21-40</p> <p>1 No. 32635 Oil pan gasket, right. 1 No. 32637 Oil pan gasket, left. 24 6x15 Cotter keys. 1½ gal. motor oil. 2 No. 16910 Center and rear center lower brg.</p> <p>Group P</p> <p>OPERATIONS 1-6</p> <p>1 No. 30669 Oil pressure gauge. 1 No. 24231 Oil pump body gasket. 1 No. 32635 Oil pan gasket, right. 1 No. 32637 Oil pan gasket, left. 1½ gal. motor oil.</p> <p>Group Q</p> <p>OPERATIONS 1-2</p> <p>8 No. 32210 Universal joint cross bushing. 8 No. 32217 Universal joint cross bushing lock wire. 2 No. 32219 Universal joint yoke dust washer.</p> <p>OPERATIONS 3-4</p> <p>1 No. 32204 Universal joint cross. 8 No. 32217 Lock wires. 2 No. 32219 U. J. yoke dust washer. 1 No. 32270 Front universal joint yoke.</p>

List of Parts for Combined Operations

SERIES 19 FOUR	SERIES 19-20 LIGHT & SPECIAL SIX	SERIES 19-20 BIG SIX
<p style="text-align: center;">Group Q (Continued)</p> <p>OPERATIONS 6-7</p> <p>2 No. 32203 Universal joint cross. 8 No. 32205 Universal joint cross bushing. 8 No. 32214 Lock wires. 2 No. 32218 U. J. yoke dust washer.</p> <p style="text-align: center;">Group R</p> <p>OPERATIONS 1-2</p> <p>4 No. 18669 Starter brushes. 1 No. 19800 Starter armature complete.</p> <p style="text-align: center;">Group S</p> <p>OPERATIONS 1-2</p> <p>2 No. 24537 Steering worm adjusting shim. 2 No. 17460 Steering worm gear thrust washer.</p> <p>OPERATIONS 11-12</p> <p>1 No. 32221 Steering worm gear. 1 No. 12372 Steering worm gear.</p> <p style="text-align: center;">Group U</p> <p>OPERATIONS 3-4</p> <p>1 No. 31918 H. & I. sliding gear. 1 No. 32591 Hand control base gasket. 1 No. 35240 Speedometer drive gear housing gasket. 1/2 gal. trans. oil.</p> <p>1 No. 31919 L. & R. sliding gear.</p> <p>OPERATIONS 8-3</p> <p>1 No. 31910 Transmission shaft. 1 No. 32591 Hand control base gasket. 1 No. 35240 Speedometer drive gear housing gasket. 1/2 gal. trans. oil.</p> <p>1 6x49 Transmission shaft cotter key.</p> <p>1 No. 31918 H. & I. sliding gear.</p> <p>OPERATIONS 11-18</p> <p>1 No. 32592 or 32593 Gear shift rod. 1 No. 32591 Hand control base gasket. 1 No. 32594 Gear shift fork.</p> <p>OPERATIONS 17-3</p> <p>1 No. 31898 Countershaft int. gear. 4 No. 6078 Countershaft rivets, long. 4 No. 31895 Countershaft rivets, short. 1 No. 35240 Speedometer drive gear housing gasket. 1 No. 32591 Hand control base gasket. 1/2 gal. trans. oil. 1 No. 31918 H. & I. sliding gear.</p>	<p style="text-align: center;">Group Q (Continued)</p> <p>OPERATIONS 6-7</p> <p>2 No. 32204 Universal joint cross. 8 No. 32210 Universal joint cross bushing. 8 No. 32217 Lock wires. 2 No. 32219 U. J. yoke dust washer.</p> <p style="text-align: center;">Group R</p> <p>OPERATIONS 1-2</p> <p>4 No. 18669 Starter brushes. 1 No. 19800 Starter armature complete.</p> <p style="text-align: center;">Group S</p> <p>OPERATIONS 1-2</p> <p>2 No. 24537 Steering worm adjusting shim. 2 No. 17460 Steering worm gear thrust washer.</p> <p>OPERATIONS 11-12</p> <p>1 No. 31887 Steering worm gear. 1 No. 12372 Steering worm gear.</p> <p style="text-align: center;">Group U</p> <p>OPERATIONS 3-4</p> <p>1 No. 31918 H. & I. sliding gear. 1 No. 32591 Hand control base gasket. 1 No. 35240 Speedometer drive gear housing gasket. 1/2 gal. trans. oil.</p> <p>1 No. 31919 L. & R. sliding gear.</p> <p>OPERATIONS 8-3</p> <p>1 No. 31910 Transmission shaft. 1 No. 32591 Hand control base gasket. 1 No. 35240 Speedometer drive gear housing gasket. 1/2 gal. trans. oil.</p> <p>1 6x49 Transmission shaft cotter key.</p> <p>1 No. 31918 H. & I. sliding gear.</p> <p>OPERATIONS 11-18</p> <p>1 No. 32592 or 32593 Gear shift rod. 1 No. 32591 Hand control base gasket. 1 No. 32594 Gear shift fork.</p> <p>OPERATIONS 17-3</p> <p>1 No. 31898 Countershaft int. gear. 4 No. 6078 Countershaft rivets, long. 4 No. 31895 Countershaft rivets, short. 1 No. 35240 Speedometer drive gear housing gasket. 1 No. 32591 Hand control base gasket. 1/2 gal. trans. oil. 1 No. 31918 H. & I. sliding gear.</p>	<p style="text-align: center;">Group Q (Continued)</p> <p>OPERATIONS 6-7</p> <p>2 No. 32204 Universal joint cross. 8 No. 32210 Universal joint cross bushing. 8 No. 32217 Lock wires. 2 No. 32219 U. J. yoke dust washer.</p> <p style="text-align: center;">Group R</p> <p>OPERATIONS 1-2</p> <p>4 No. 18669 Starter brushes. 1 No. 19800 Starter armature complete.</p> <p style="text-align: center;">Group S</p> <p>OPERATIONS 1-2</p> <p>2 No. 24537 Steering worm adjusting shim. 2 No. 17460 Steering worm gear thrust washer.</p> <p>OPERATIONS 11-12</p> <p>1 No. 31887 Steering worm gear. 1 No. 12372 Steering worm gear.</p> <p style="text-align: center;">Group U</p> <p>OPERATIONS 3-4</p> <p>1 No. 31918 H. & I. sliding gear. 1 No. 32591 Hand control base gasket. 1 No. 35240 Speedometer drive gear housing gasket. 1/2 gal. trans. oil.</p> <p>1 No. 31919 L. & R. sliding gear.</p> <p>OPERATIONS 8-3</p> <p>1 No. 31910 Transmission shaft. 1 No. 32591 Hand control base gasket. 1 No. 35240 Speedometer drive gear housing gasket. 1/2 gal. trans. oil.</p> <p>1 6x49 Transmission shaft cotter key.</p> <p>1 No. 31918 H. & I. sliding gear.</p> <p>OPERATIONS 11-18</p> <p>1 No. 32592 or 32593 Gear shift rod. 1 No. 32591 Hand control base gasket. 1 No. 32594 Gear shift fork.</p> <p>OPERATIONS 17-3</p> <p>1 No. 31898 Countershaft int. gear. 4 No. 6078 Countershaft rivets, long. 4 No. 31895 Countershaft rivets, short. 1 No. 35240 Speedometer drive gear housing gasket. 1 No. 32591 Hand control base gasket. 1/2 gal. trans. oil. 1 No. 31918 H. & I. sliding gear.</p>

Simple Lubricating Oil Tests

By Joseph A. Anglada

TESTS of lubricating oil for impurities, the amount of water it contains, the specific gravity, flash point, viscosity and color mean little to the average man, who does not possess the necessary equipment for such analyses.

The performance test permits the owner to form his own conclusions, which will lead to reliable results if conscientiously conducted. To do so, the test for each oil must extend over from five hundred to one thousand car miles, and the conditions under which the car is run must be as nearly identical as possible during each test.

There are several simple tests which the car owner can make as a guide in the selection of an engine oil, and readily establish the principal characteristics of the oil.

The first of these is known as the blotter test. A drop of the oil is put on a clean white blotter. If the drop disappears overnight and does not leave a dark-colored stain, it indicates to a certain degree that there is little free carbon in the oil. If, however, a stain is left, it indicates that there is a certain amount of free carbon in the oil which would later be deposited in the engine.

It is important to know the fluidity of an oil in cold weather, because an oil which congeals readily in cold weather may make it necessary to run the engine for several minutes without any oil at all until the engine heats up. This is particularly the case with trucks stored in unheated garages and fitted with engines lubricated on the splash system. If the oil congeals in the crankcase, it may be several minutes before the oil is heated sufficiently to be thrown up on the cylinder walls and the bearings by the motion of the reciprocating parts. To determine the fluidity of two oils in cold weather two sample

bottles of the oil should be outside of the window on a cold day. Then turn each of the bottles upside down quickly and note the rise of the bubbles of air from the top to the bottom of the bottle. If the bubble rises to the top of the inverted bottle quickly, it indicates that the oil will flow at the existing temperature. If the bubble does not rise, it serves as a guide to indicate that the oil is too thick.

Another ready test is the emulsion test. A sample bottle is filled one-third full with the oil to be tested and then an equal amount of water added. After the bottle has been corked and shaken vigorously for 20 or 30 minutes, it is set aside for 24 hours. Good oil shows a fine or distinct line of demarkation between the water and the oil above it. This indicates the absence of acid compounds. A slightly poorer grade of oil shows a less distinct line of demarkation, and a poor oil a curdled mass floating upon a milky colored water at the bottom.

Repairshop Shortcuts

No. 3055—Hanging the Trouble Lamp.—The trouble lamp can be hung anywhere in the shop by placing hooks 3 ft. apart over the entire ceiling. A $\frac{1}{8}$ -in. rod with a loop in the upper end enables the hook to be easily caught.—George C. Rohrbach, Penn's Garage Equipment Co., Reading, Pa.

No. 3056—Taking Up Vise Jaw Lost Motion.—Annoying lost motion in the vise jaw at close range is taken up by attaching a valve spring to the lower part of the movable jaw so that it pushes against the stationary jaw.—Arthur G. Raabe, Long Island City, N. Y.

No. 3057—Service Truck Gear.—The supporting gear for the chain fall on a service truck is constructed of portions of old car and truck frames riveted together. The I-beam is supported at the top and wooden cross pieces take the frame horns.—Frank A. Brown, Selden Motor Truck Co., New York City.

No. 3058—Removing Starting Dog on Willys Six.—The starting dog on the engine of the Willys Six is removed with a box wrench which is offset so as to clear the timing gear. The wrench is about 3 ft. long so as to get enough leverage to loosen the nut which tightens in use.—Henry M. Holt, Willys-Overland, Inc., New York City.

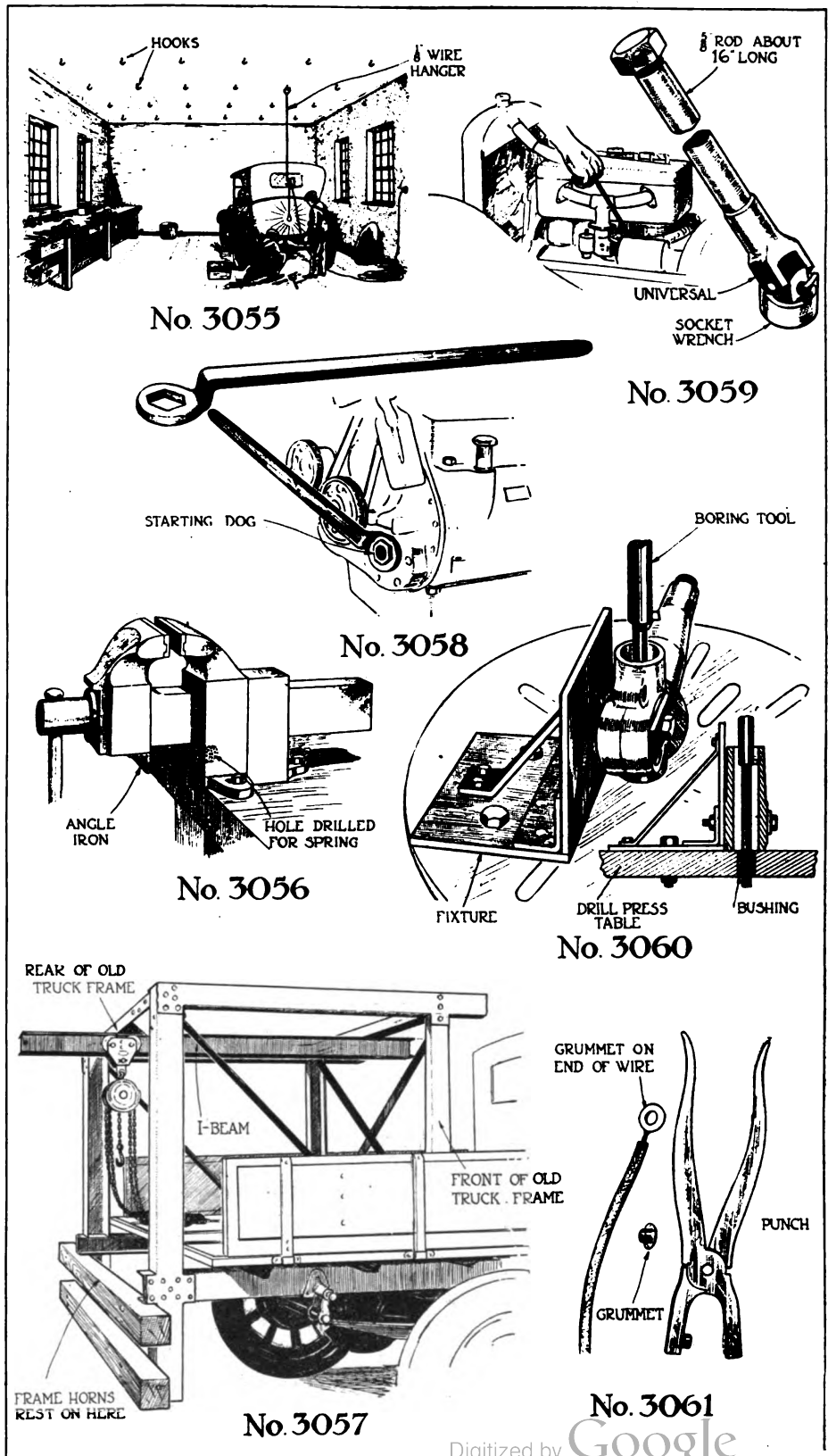
No. 3059—Universal Socket Wrench.—A socket wrench to get at nuts and cap screws in awkward places is made up, as shown in the sketch, with a block and two forks, the upper one extending upward and having a hole for a crossbar to turn the device with.—Harry G. Okamura, Selden Motor Truck Co., New York City.

No. 3060—Drill Press Jig.—An angle plate jig constructed of heavy sheet metal enables irregular shaped pieces to be bored in the drill press.—Gus Ferguson, Selden Motor Truck Co., New York City.

No. 3061—Emergency Wire Terminals.—Brass grummets can be used for wire terminals if the regular terminals are not at hand. A special punch presses the parts of the grummet together.—George C. Rohrbach, Penn's Garage Equipment Co., Reading, Pa.

MAKE A DOLLAR

SEND in a sketch and description of the device you doped out to make your work easier. Motor World will pay a dollar for every idea accepted for publication.



THE LAW

By GEORGE F. KAISER

Perplexed?

Does some point of law perplex you?

Why don't you ask MOTOR WORLD's legal editor to discuss the question?

Dealer Not Liable for Individual Fraud of Agent

That where a garageman's agent, who had been left to keep his place of business open during his absence, wrongfully took an automobile and sold it for much less than its actual value, the garageman might recover the property from the buyer, was the decision of the Supreme Court of Nevada in the recently decided case of Robertson vs. C. O. D. Garage.

Suit was brought by the garageman to recover the automobile, which he claimed had been stolen from him.

The garageman was the agent of the Willys-Knight Automobile Co. for the sale of its cars in certain counties of Nevada, including Minden, Douglas County, with his place of business in Reno. The buyer was a general dealer in automobiles and was the sales agent of the Ford, Chevrolet and Buick cars, and operated, in connection with its business, a garage at Minden, Nev., under the name and style of C. O. D. Garage Co., a corporation.

During the month of May, 1919, the dealer desired to attend a convention of automobile dealers in San Francisco, and having no person in his employ to leave in charge of his place of business, and desiring it to be kept open during his absence, one P. B. Zeigler, an acquaintance of several months' standing, and a person who had spent much time in and about dealer's place of business, and in whom dealer necessarily placed confidence and trust, volunteered, for the dealer's accommodation, to keep his place of business open for him during his absence in attendance upon said convention. With this understanding, the dealer departed for San Francisco, leaving Zeigler in charge of his office. The dealer was the owner of, and had in his place of business for sale, four or five Overland cars, one of which had been used by him for several months as a "demonstrator car" that bore a dealer's certificate license. The sale price of the demonstrator car, new, was \$1,050. Its then sale value, in dealer's judgment, was \$950. The dealer was absent two days longer than he had expected and was away from his office four or five days. He testified that before he left for San Francisco he had no understanding or agreement with Zeigler about the sale of any cars or of the car in dispute, to the buyer, or to any one else; that Zeigler was merely left in charge of his place of business, to keep the same

open during his absence and for his convenience and accommodation, and for that purpose only.

It appeared that Zeigler, during the dealer's absence, took the "demonstrator car" from the place of business and, in company with two men, drove into Douglas County, passing through the town of Minden, a distance of over 50 miles from the city of Reno, where he met with an accident to the car and was compelled to have it towed into Minden and placed in buyer's garage for repairs. It was admitted at the trial that to repair the damage would cost about \$35 or \$40. Two days thereafter Zeigler returned to Minden with another of dealer's cars, and, while in buyer's garage and in buyer's presence, removed the license certificate plate from the damaged car and placed it upon the new car, and on the next day (Sunday) sold the damaged car to buyer for the sum of \$600. The car was paid for by the buyer's check, made payable to P. B. Zeigler, at his request, on a bank in Minden, which was indorsed and cashed by Zeigler at the bank on the same day. The evidence showed that in the transaction Zeigler represented himself to be the agent of dealer. Zeigler returned to Reno with the new car. On dealer's return from San Francisco, he found his place of business closed and Zeigler gone therefrom, and his "demonstration car" missing. Upon inquiry and search, he learned that Zeigler had disposed of his "demonstrator car" to buyer and decamped with the money received therefor, leaving no trace of his whereabouts. Plaintiff thereupon obtained a warrant for his arrest, which has never been executed. Within four or five days thereafter the dealer went to Minden and made demand upon the buyer for the return of his car, which was refused, and thereafter brought this action in the district court of Douglas County to recover the possession of the car.

The buyer's evidence consisted mainly of an endeavor to establish the relation of a general agency between Zeigler and plaintiff and Zeigler's authority to dispose of the car. It tended to show that plaintiff had admitted in a conversation with C. O. Danberg, defendant's president, at a time about 10 days after the transaction, that he had trusted Zeigler, and that he was selling cars for him and had sold one at Verdi, Nev., and had received \$40 commission on the sale.

The court said: "It must be conceded that one who wrongfully takes goods without the owner's consent acquires no

title thereby, and can convey none, by any sale or transfer he may make. So when such a taker sells the goods even to an innocent purchaser for value, the owner may pursue his property and retake it wherever found. Conceding, then, for the purposes of this case, P. B. Zeigler to have been plaintiff's agent, if he took the car wrongfully or in violation of his trust, without plaintiff's consent, and sold it, the defendant acquired no title.

"We are further of the opinion that under the particular facts and circumstances Zeigler was not plaintiff's authorized agent to dispose of cars and receive the money therefor. He was left in charge of plaintiff's business for the particular purpose of keeping the same open, and not as his manager or salesman. Leaving Zeigler in charge does not warrant the inference that it was necessary, proper, and usual for Zeigler to close up plaintiff's business, take a particular car therefrom, and dispose of it in the manner stated, receive the money therefor and decamp, leaving no trace of his whereabouts. While the law, within certain well-defined limits, will make the principal liable for frauds perpetrated in its name by the agent, it has never been held that the principal could be made liable for the individual frauds of an agent, perpetrated on his own account." (199 Pac. Rep. 359.)

Tax Charged on Sale Price to Dealer

Editor Motor World: The tire companies have been charging us excise tax at the rate of 5 per cent on the confidential list.

We have information that claims that the tire companies have no right to make such a charge, and that we are entitled to a rebate for every invoice charged as above stated.

Can you advise us whether or not this is correct and what department at Washington should we write to to get the authentic information?

We are told that the manufacturer pays 5 per cent on the manufacturing cost.

We would thank you for an immediate reply, as this might involve a considerable amount of money to us.—M. T. Co., Albuquerque, N. M.

Answer: The tax should be charged on the sale price to you. See article in last week's issue, Sept. 21, of the Motor World, page 21.

SCIENTIFIC CONSTRUCTION

GARAGES

SHOWROOMS

REPAIRSHOPS

Conducted by DONALD D. BLANCHARD

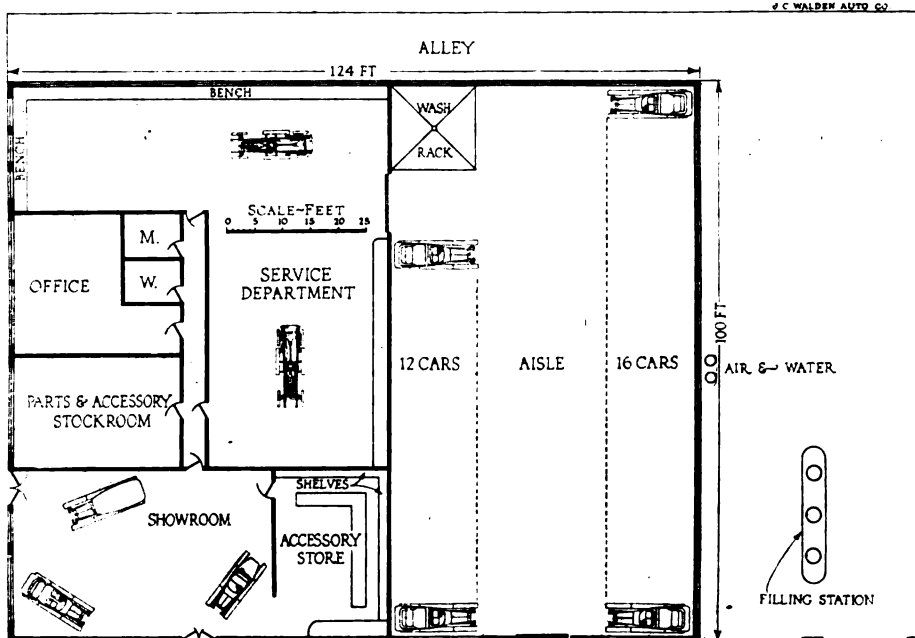
The Filling Station and the Dealer Building

Drive-In Filling Station Reduces Value of Street Frontage for Display

MOTOR WORLD is glad to receive and answer inquiries for garage plans, but in order that there may be as little delay as possible in submitting the plans desired it is imperative that the following information be given:

Size of plot, with rough sketch showing shape and its relation to adjoining plots; name and number of departments operated; number of cars to be shown in salesroom; number of cars in garage; any other pertinent details.

THE practice of combining a drive-in filling station with a dealer building is becoming quite common. On a corner location, it is placed on the corner and the building erected around it. Where the property is located in the middle of the block, it is necessary to set the building back from the street in order to get the filling station in. In either case, the value of the street frontage from the standpoint of car and accessory display is depreciated. It is difficult to measure this loss in dollars and cents as it is impossible to determine just what business results from display. However, the dealer should realize these factors, and before deciding to install a filling station in connection with his building, he should satisfy himself that the profits it produces will



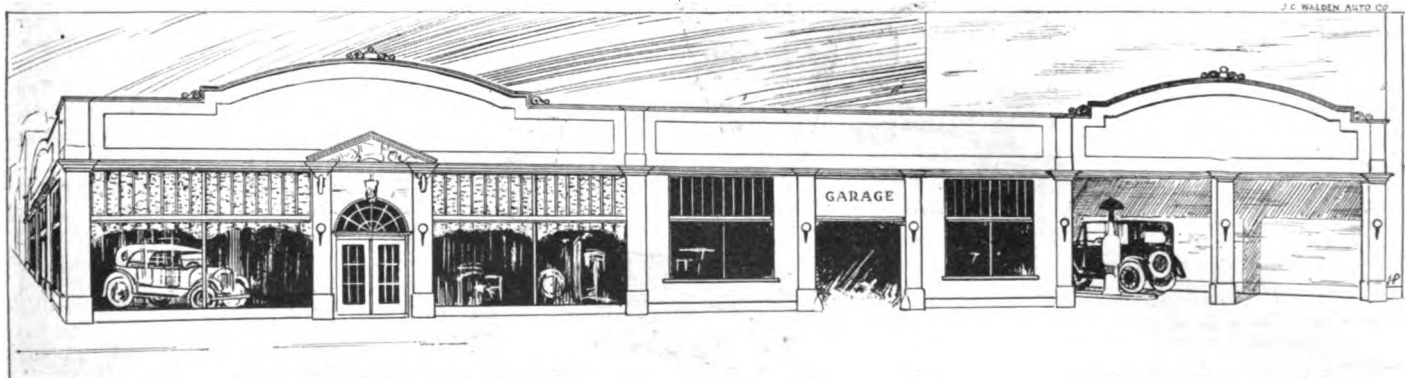
Floor plan for complete dealer building on a corner with drive-in filling station included

more than compensate for any losses in other departments.

In the building illustrated on this page, the car and accessory sales departments have been given the valuable corner location. The filling station has been placed at the side of the building. The entrance to the station is directly from the main street. After a car has had its tanks filled, it can either back out or drive around the building through the twelve foot alley at the rear. This

arrangement, of course, does not provide the convenience that would be obtained if the filling station were located on the corner. It would seldom be possible to use this arrangement as the conditions here are unusual.

No columns are used as the roof over the showroom, store, parts department, offices and service department can easily be supported by the partitions. The roof over the garage should be supported by trusses.

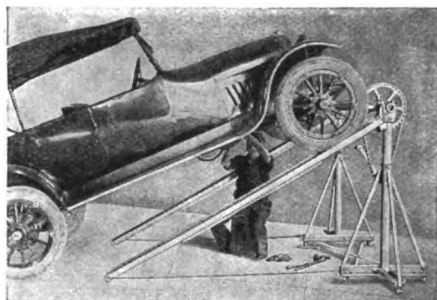


The arch over the double driveway to the filling station improves the general appearance of the building by giving it symmetry

Automotive Equipment

FLOOR LEVEL UNDER WORKER

This piece of garage equipment elevates the car to any desired height so that the mechanic can work on the underneath portions. The tracks are made of 6 in. channel stiffened in the middle. The up-rights are 2½ in. steel pipe resting on angle steel bases which are braced in three directions. The horizontal chain drum which rotates in open cast iron boxes is also made of 2½ in. pipe. The car is pulled up the tracks by means of a chain which is attached to the axle. This chain winds around the chain drum which is in turn rotated by turning a crank through a chain drive. The tracks are 9 ft. long and the height of chain drum from floor is 58 in. Price \$125.—Manley Mfg. Co., York, Pa.



Floor Level Under Worker

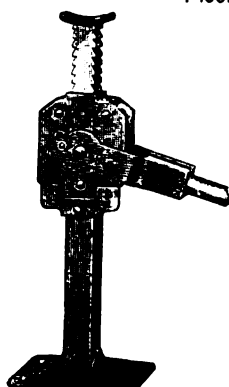
a special non-absorbent, heat-resisting fiber is substituted. There are two types—No. 101-A, in which the outer edge is turned over, making a closed gasket, and No. 101-B, with plain edges.—Victor Mfg. & Gasket Co., 5750 Roosevelt Road, Chicago.

MANZEL MECHANICAL CHASSIS LUBRICATING SYSTEM

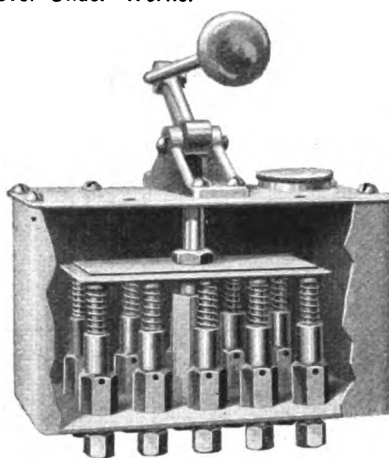
The Manzel system is designed to enable the driver to lubricate every chassis bearing without leaving his seat in the car. It consists of a small tank bolted to the dash under the hood in which are arranged eight to twelve (depending upon the number of points to be lubricated) small pumping units, with an oil tube or pipe leading from each. By means of distributors these main pipes are divided at proper places to provide a separate line for each point to be lubricated. Flexible tubing is used to connect the points where there is any movement and a check valve at the end of each main line keeps the oil tube constantly filled with oil. A rod for operating the pump runs from the oil tank to the button on the instrument board. To lubricate the car, it is simply necessary to pull the button on the instrument board and oil is forced under pressure from the pump units to every bearing on the car.—Manzel Bros. Co., 319 Babcock Street, Buffalo, N. Y.

MOBILIFT JACK NO 1

A double ratchet, electrically welded all steel jack. It raises the car one inch for every full up and down stroke of the handle. The lifting capacity is 2000 lb. The finish is battleship gray and the handle telescopes. The jack is packed in an individual carton. Price \$4.50.—The National Jack Co., Cincinnati, Ohio.



Mobilift Jack No. 1



Manzel Mechanical Chassis Lubricating System

GOLF BAG HOLDER

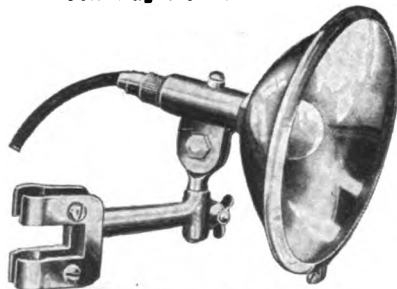
The holder itself is a cylindrical crate made of steel. It is attached to the outside of the car by means of clamps, and is finished in either black or nickel. Prices are \$6 and \$7 respectively.—Standley Skid Chain Co., Boone, Iowa.



Golf Bag Holder

DELIGHT SPOT LIGHT

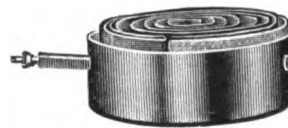
This lamp has the single shell construction, the reflector and body being combined in a single unit. The shell is pressed from heavy gage brass, is highly polished and nickel-plated. The lens is convex and is held in place by a nickel-plated band. The bracket is made of brass. The bulb is a 6-8 volt, 21 cp. Mazda C double contact type. A focusing screw is provided for adjusting. Five feet of cord is furnished with the lamp.—The K-D Lamp Co., Cincinnati, Ohio.



Delight Spot Light

NEW VICTOR GASKET FOR FORDS

This new gasket is identical with the standard Victor copper-asbestos Ford gasket No. 101, with the exception that in place of the top layer of copper



Martin's Inner Tube Box

MARTIN'S INNER TUBE BOX

These boxes are made up of two drawn steel shells with a galvanized finish. The valve stem projects and serves as a means of locking the two parts together. A few pounds air pressure is pumped into the tube after it is placed in the box. These boxes are made for 3, 3½, 4, 4½ and 5 inch tubes. Prices are \$1.50, \$1.75, \$2, \$2.25 and \$2.50 respectively.—The Martin Metal Mfg. Co., Wichita, Kan.

SWINGING BRACKET STEAMER

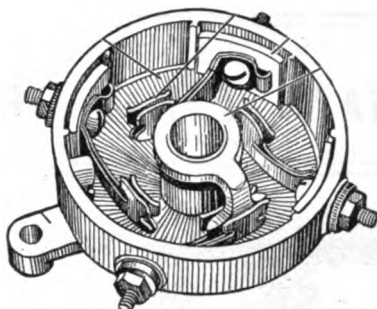
This is a steam generator for providing steam for opening batteries. It is carried in a swinging bracket so that it may be mounted on the wall. In this way it does not take up any bench room. Price \$18.—S. R. M. Orum, 503 North 11th Street, Philadelphia, Pa.



Swinging Bracket Steamer

THE PONY TIMER

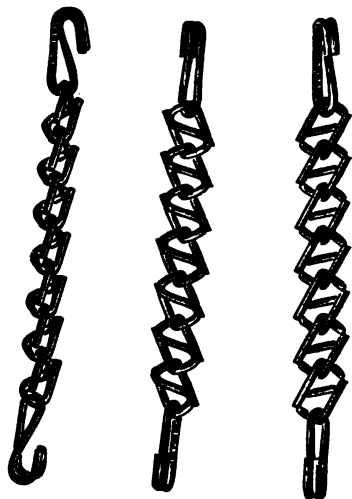
This timer consists of a shell, a one piece rotor brush, four one-piece, two-arm springs, four insulator pads and washers and an insulator disk and oiler. The springs, pads and washers are joined by brass contact screws. It is designed so that the essential parts are easily replaceable. Price \$3.50.—American Engineer Factories, Inc., 30 Church Street, New York City.



The Pony Timer

PEERLESS NON-SKID CHAIN

The links in this chain are said to be made so that they cannot twist or turn and cut the tire. The unusual construction of the links can be seen from the illustration. No tools are necessary to put on this chain and a special lever lock takes up the slack. They are made in all sizes from 30x3½ up to 36x6 in. Prices range from \$6.50 to \$14. per set. Replacement cross chains are also furnished.—Peerless Chain Sales Co., Winona, Minn.



Peerless Non-Skid Chain

TELTAILITE

The purpose of this device is to tell when the taillight is out. The dashlight is connected on a relay circuit which is operated by the taillight. It is arranged so that the dashlight cannot burn unless the taillight is burning. The advantages of this device are that it permits the use of tail and dash lights of the same voltage as all other lamps on the car and also permits extinguishing the dash lamp without putting out the tail light. The device is easily installed. Price \$3.—Potter Specialties Co., 140 North Dearborn Street, Chicago, Ill.



Teltailite

MAC-LITE STORAGE BATTERY

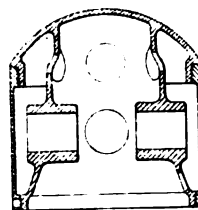
This battery is sold with a two year guarantee. The plates are said to be very ruggedly constructed and the separators are subjected to a special treatment which is said to remove all foreign organic matter.—Mac-Lite Storage Battery Co., 62 Stanhope Street, Boston, Mass.

SUPER SIX STEAM GENERATOR

The boiler in this battery steam generator is of the flash type. As soon as the gas is lighted, the generator begins to produce steam. It is arranged for wall mounting. Price \$30.—S. R. M. Orum, 503 North 11th Street, Philadelphia, Pa.

STERNO ANTI-FREEZE

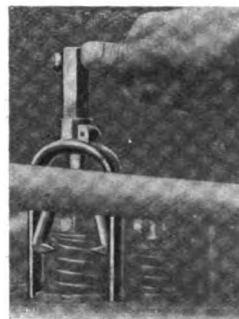
The base of this compound for preventing the freezing of the cooling water is denatured alcohol. It is claimed that it will not injure any part of the cooling system or engine. It is sold in gallon cans only. Price \$2.—Sterno Corp., 9 East 37th Street, New York City.



Ringless Piston

RINGLESS PISTON

This piston consists of a piston center, in which the piston pin is secured, provided with either a domed or concave head as required for different types of engines. A thin shell of cast iron or other metal threaded at the ends only is slipped over the piston center and screwed into position. The shell is cylindrical and made with the customary difference of .002 or .003 in. between its diameter and the diameter of the cylinder. This working clearance space is sealed by the oil film.—Ringless Piston Co., Inc., 103 Park Avenue, New York City.



J & B Valve Cage Remover

J & B VALVE CAGE REMOVER

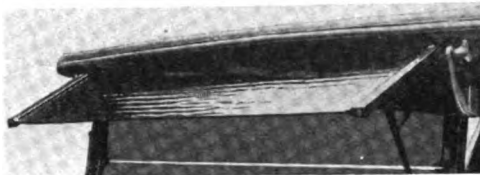
A special tool for removing the valve cages in Buick or other engines having a 2½ in. cage. It is said to be easy to operate and positive in action. It is packed in a wooden box. Price \$5.00.—J & B Mfg. Co., Pittsfield, Mass.



J & B Rocker Arm Lifter

J & B ROCKER ARM LIFTER

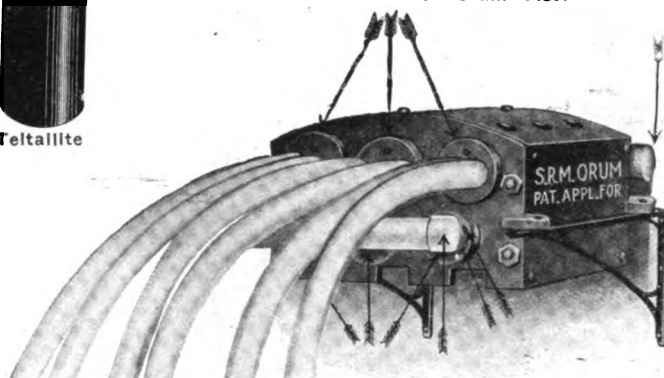
This tool is used in conjunction with the valve cage remover, and is for the purpose of lifting the rocker arm clear from the ball end of the pushrod, thus allowing the pushrod to be sprung out of place, and the rocker arm to be revolved about its axis, away from the valve stem. Price \$2.50.—J & B Mfg. Co., Pittsfield, Mass.



A-L-T Sunbeam Visor

A-L-T SUNBEAM VISOR

A piece of ¼ in. green or amber ribbed Pel-Lock glass is used in this visor. The color is in the glass itself, and the ribs diffuse the light. All fittings are of solid brass and are nickel-plated. The frame is made of steel, finished in black. Split washer and lock nut make it possible to set the visor with ordinary pressure of thumb and finger so tightly that it will not rattle loose. It is made in sizes suitable for any make of car with the exception of the Ford open model.—Thoma & Son, Inc., Fairfield, Iowa.



Super Six Steam Generator

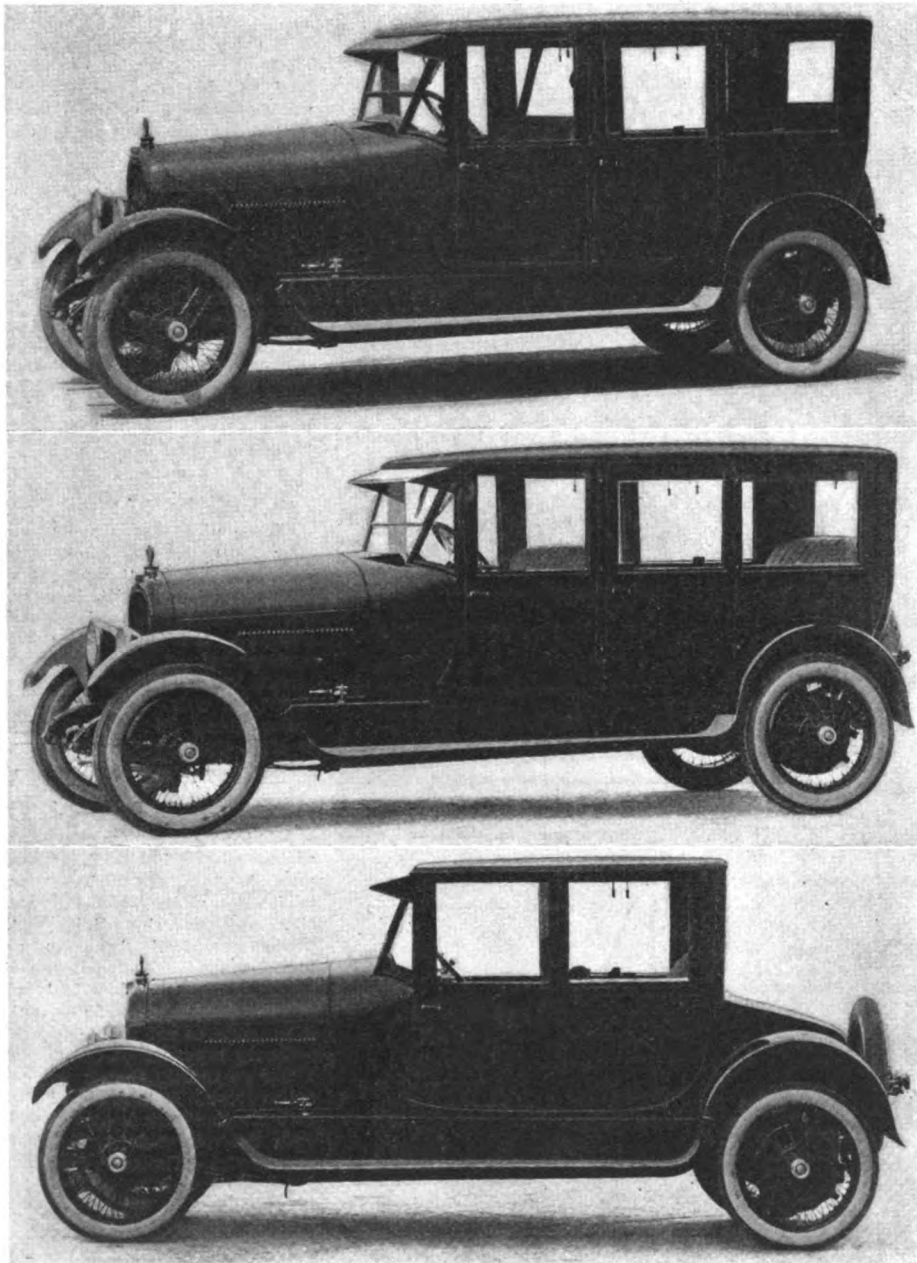
TRAUBE AUTOMATIC DOOR OPENER DEVICE

The operation of this device for opening doors of a garage without leaving the car is as follows: A 20 in. x 14 in. floor plate is placed in the driveway and when one wheel of the car passes over it it is depressed about 1½ in. This action lowers an arm to which is fastened a cable which is carried underground and through a pipe to the inside of the garage where it releases a latch-lock and permits the springs to open the doors. The weight of a man is not sufficient to operate the plate. Price \$35.—Fabric Dry Cleaning Machinery Co., Inc., 47th Street, near Second Avenue, Brooklyn, N. Y.



Traube Automatic Door Opener Device

More Value for the Money in



Marmon Now Manufacturing Own Enclosed Bodies

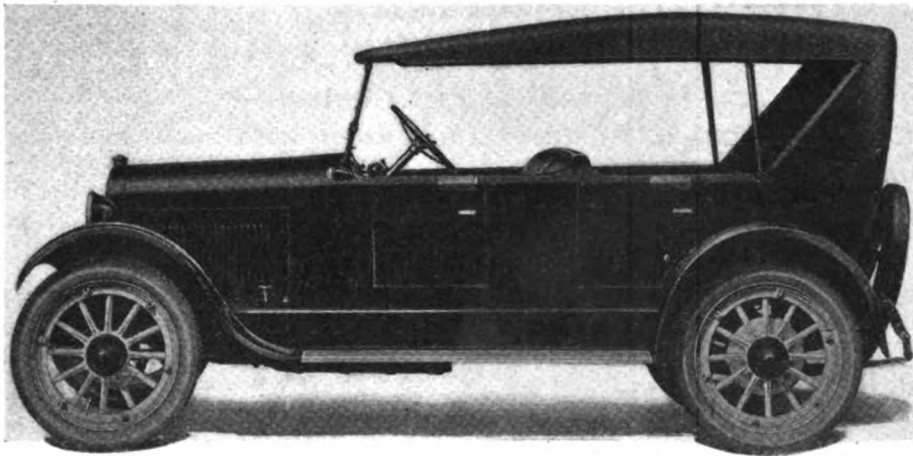
Three new enclosed Marmon bodies are now being entirely produced in the Marmon shops. Previously only the open bodies were Marmon made. All are mounted on the 34 chassis and are replete with little conveniences that add to the attractiveness of the enclosed car. The Suburban, shown at the top, priced at \$5,425, has an unusually low and light appearance. The Sedan, in the center, at \$5,275, also appears low and this also gives the effect of greater length. The Coupé, lower view, \$4,875, is very compact and has the usual rear deck.



Grant Six Adds to Standard Equipment

The Grant Six has added as standard equipment wood disk wheels, spare cord tires, Neville sliding steering wheel, drum-shaped headlamps, parking lamp on the cowl and bumpers in both front and rear, these additions being made without increase in the price.

New Bodies and Equipment

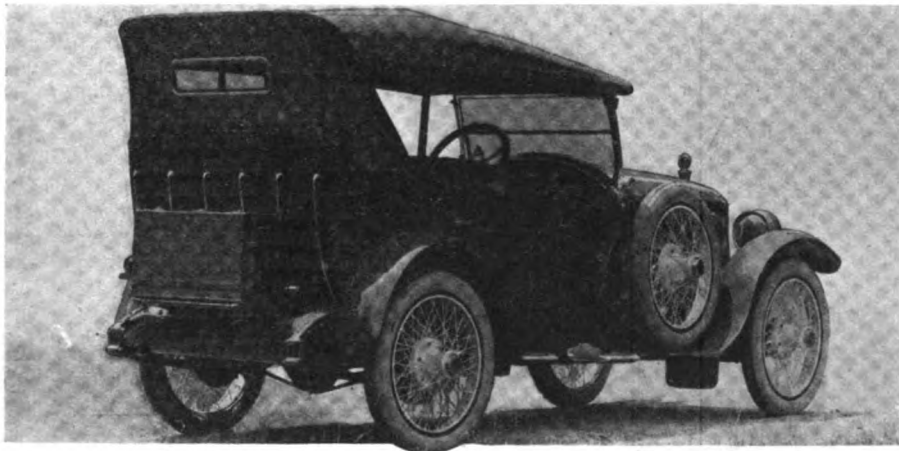
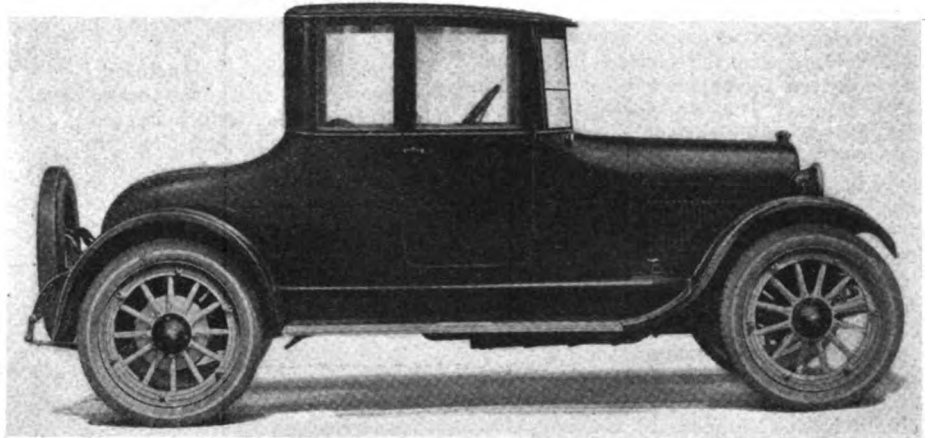


**New Reo Touring Car,
\$1675**

This and the business coupé are mounted on the Model T chassis of last year which is continued with minor refinements. On the touring are to be found two auxiliary seats. The rear seat cushion is a separate assembly and can be removed to allow access to the carrying compartments for the curtains.

**New Reo Business Coupe,
\$2150**

Designed especially for doctors and other professional use. It is also mounted on the Model T chassis of last year and is fully equipped with all devices necessary or convenient to the purpose for which it is intended.



**Anderson Ultra Sport
Model, \$2935**

Anderson has added three new body models to the standard Six chassis, the illustration being the Ultra Sport. Regularly this is fitted with disk wheels, wire optional, aluminum steps, semi-California top and a portable tourist trunk. The other models are a 4-passenger Coachbilt finished in celestial blue at \$1,750, and a Morris Special, with red leather upholstery and nickered vertical rods in back of the tonneau at \$1,850.

**The Lincoln Phaeton
De Luxe**

A four-passenger sport model just added to the Lincoln line. It has a 136-in. wheelbase, body panels of hammered aluminum reinforced by a well-braced wooden frame and upholstery of brown Spanish leather.



Easier Driving Facilities Characterize New Hudson Super Six

**Lighter Clutch Action and Improved Gearset Control—
Engine and Other Mechanical Features Continued with
Minor Refinements in Design—Bodies Remain Prac-
tically as Before and Prices Are Unchanged**

WITH a practically unchanged exterior, the new Hudson Super Six has been put into production and some models are now coming through to dealers. The most important changes are those having to do with the control of the car and are confined to clutch, gearset and steering wheel. The engine is practically unchanged except for the manifolding and the chassis lubrication is improved by the use of new design wick oilers. The wheelbase, price and all cardinal specifications remain exactly as they were before and to the eye, the only notable change is in the rearrangement of the driving compartment.

Such changes as have been made in the control mechanism have been made with the idea of lessening the effort on the part of the driver. The clutch mechanism, while remaining fundamentally the same as before, is much lighter in weight, especially the parts that spin after the clutch is disengaged. In the new construction, the gearset shaft is carried forward and forms the clutch shaft, eliminating the three jaw slip joint used formerly as a connection between the clutch and gearset parts. The drum carrying the driven disks is aluminum and the disks are now thin and do not carry the cork inserts which are now in the driving disks. The drum also carries cup shaped inserts which act as the clutch spring retainers. There are eight clutch springs spaced equally around the drum, giving a balanced pressure entirely around the clutch. The clutch release spider depresses these clutch springs for relieving the pressure on the clutch during disengagement. Actual separation of the clutch plates is taken care of by small springs placed between the clutch disks. Anti-rattle springs are also placed between the springs to prevent noise when the clutch is relieved of pressure. The clutch thrust bearing grease cup has been eliminated and a large annular ball throwout bearing is automatically lubricated by the clutch oil.

The gearset in the main has not been changed excepting where necessary to accommodate the new clutch design. The speedometer drive has been enclosed

Changes in the Hudson Super-Six

Clutch redesigned.
Longer gearset lever.
Automatic clutch bearing lubrication.
Speedometer drive enclosed.
Two-pawl emergency brake lever.
Steering gear ratio increased.
Engine manifolding changed.
Chassis lubrication by wick oilers.
Deep crown fenders.
Improved side curtains.



The driving compartment showing the new arrangement of the instrument board and the longer gearshift lever

and is now with the gearbox. The gearshift lever, however, has been lengthened and the ball handle placed close to the driver's hand. It is longer than the old one and is more accessible.

The emergency brake lever is arranged to give greater leverage and the ratchet teeth have been made heavier and larger. In order that the distance between stops on the quadrant may not

be thereby increased, there is an additional pawl which goes into action alternately with the other one, thus giving as many stops as before with teeth twice the size.

The ratio of the steering gear has been changed from 7.5:1 to 9.5:1 which has not only the effect of making steering easier, but also permits the use of a heavier worm wheel with longer life and more wear resisting qualities. The accelerator pedal has been placed to the right of the brake pedal and gives a more restful foot position.

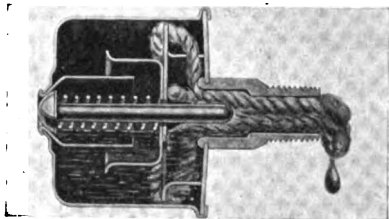
The Super Six engine, which has been in use since 1916 has been continued without fundamental alterations. An important change has been made in the air intake and manifolding. All air is now preheated, the previous practice having been to use all cold air. In making the change, consideration has been given to the fact that the main objection to the use of all hot air is the tendency toward restriction in the air intake manifolds, particularly at the elbows.

In order to avoid this difficulty, globe elbow joints are used, giving a large volume of piping at the turns and avoiding any tendency toward restriction in the manifolding. There is another globe at the point of maximum depression just before entering the carburetor. Air pressure balance on the carburetor is secured by a compensating tube which connects the air intake with the float chamber. This results in gasoline economy when the throttle is opened quickly.

Internally, the manifolding has been altered so that a modified form of hot spot is provided between cylinders 1 and 2; 5 and 6. The intake manifold at these points is brought into close proximity with the exhaust and a pocket formation is provided in the intake

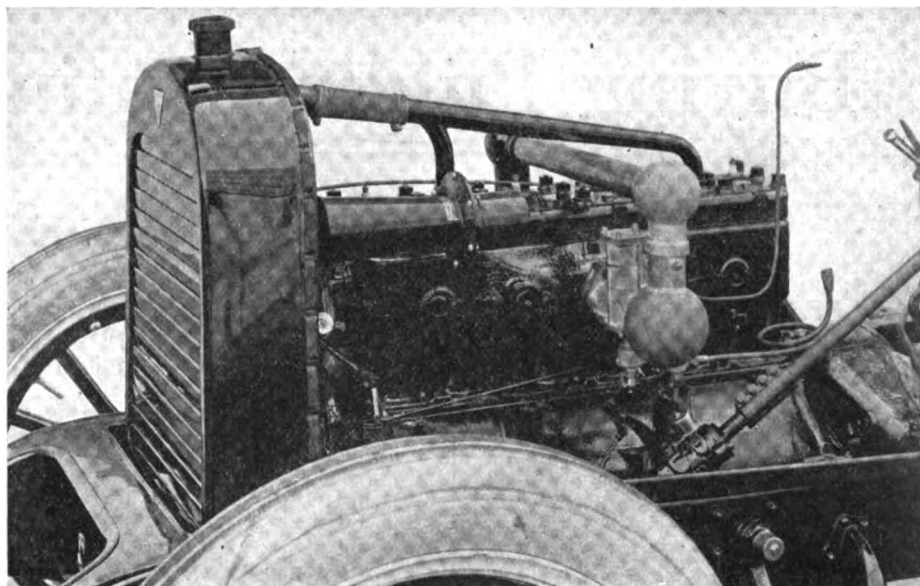
so as to revaporize the condensation at these points. This aids materially in shortening the warming-up period.

The lubricating points on the chassis are taken care of by a new type of oiler which does away with grease cups. The oiler contains a reservoir and a wick feed. A new type of pump oil can is also provided with the car so that the oil is forced into the oil cups and then



The new type oiler used for chassis lubrication operates with a wick which is kept soaked by the splashing of oil in the compartments. The reservoir is filled with a pressure oil can, which is a part of the regular equipment of the car.

The same Super Six engine is retained in the new models, but the manifolding has been changed. The most noticeable feature is the globe elbows on the manifold, which reduce to a minimum the restriction of the gas at the turns.



is fed from the reservoirs which are contained in the cup to the points to be lubricated by means of the wick feeds.

In exterior appearance, the Hudson is little changed. The deep crown fenders which, because of the increased depth of flange, are more efficient as mud guards, have replaced the previous type. The front fenders now have aprons that extend to the extreme front end of the spring hangers. There is a splash apron placed between the front spring horn which not only improves the appearance of the car, but also affords further protection.

The tire size remains the same but the tires now provided are cord as standard equipment in place of fabric. In the detail work of the body, there have been a few changes, although the body lines remain the same. The door

jams are now of pressed steel in place of wood and consequently more durable and solid. There is also an improved type of side curtain provided giving better weather protection. The windshield is now fitted with a metal strip with a rubber interlining between the two windshield glasses, giving complete weather protection at the front end. No change of price has been made.

Tractor Show In January

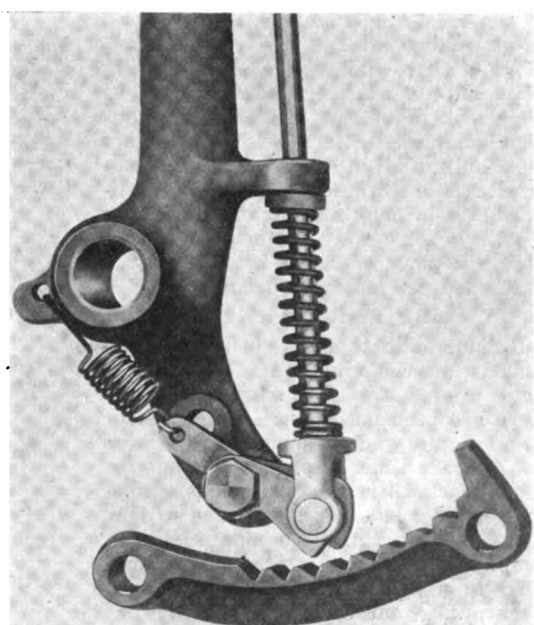
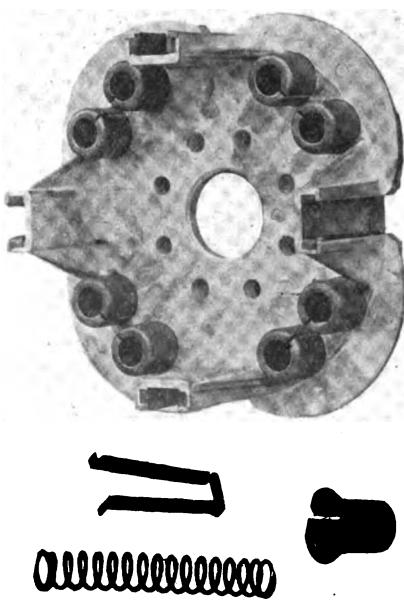
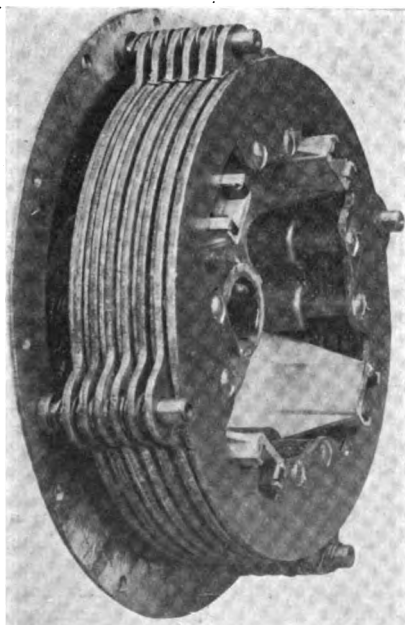
CHICAGO, Sept. 26—The Seventh National Tractor Show and Educational Exposition will be held Jan. 30 to Feb. 4, inclusive, on the Minnesota State Fair Grounds, Minneapolis. For the present, the show management will make its home in the offices of the National Implement and Vehicle Assn., 72 West Adams Street, Chicago.

Following Up Show Prospects

TORONTO, Sept. 26—An interesting method of following up the motor show at the Canadian National Exhibition has been worked out by the Marmon distributor here, who has sent out cars on a demonstration tour of the province to reach prospects whose names were obtained at the show.

Receiver for Hinkley

DETROIT, Sept. 26—An involuntary petition in bankruptcy has been filed by creditors against the Hinkley Motors Corp. and the Security Trust Co. has been appointed receiver. Acts of bankruptcy are alleged in the payment of several creditors' claims while insolvent. The liabilities are said to total approximately \$1,500,000 while the fixed assets amount to less than \$1,000,000.



The clutch has been entirely redesigned and the parts lightened. The spider is of aluminum and the illustration shows the new features. At the right is seen the new emergency brake lever, which has two pawls and teeth in the ratchet twice the size they were before. Each pawl engages at a different time, giving the same effect and number of stops as with the smaller teeth.

Buying Public Continues Active

SHOWING FOR MONTH SUSTAINS CONFIDENCE

Slight Decline in Industrial Centers Balanced by Increase in South

NEW YORK, Sept. 26—The feeling of confidence engendered in the automotive industry by the unexpectedly good business of the summer months is being sustained by the September sales showing and the belief that there will be no serious slump in trade in October or November.

Liquidation of high priced inventories by passenger car makers is rapidly nearing completion and they are buying supplies at the market. There also has been a gratifying increase in the efficiency of labor. These two factors together have been responsible in no small degree for the substantial price cuts which have been made and which have been passed on to the "ultimate consumer," in marked contrast to the situation in many other lines.

Industry Mutually Helpful

There is a striking disposition throughout the industry to be mutually helpful. The parts and accessory manufacturers are fully alive to the difficulties confronting the vehicle makers and are disposed to assist them in every way possible. In respect to inventories and labor, the parts makers are in much the same position as the car manufacturers. This has been reflected in substantial reductions within the past few days in some of the most important unit parts used in assembled cars.

While there has been a slight falling off in sales of passenger cars at retail in the great industrial districts, this has been balanced by increased business in the South and in the leading agricultural sections where farmers are liquidating their bank indebtedness and are replacing some worn automotive equipment. Reports of better business in the South are particularly encouraging.

Better Feeling Increases

It is notable that the feeling in Detroit is increasingly hopeful. Employment figures for that city show that there has been no decline in the number of men employed although a few more are on part time. Ford production for September will run several thousand behind August but this is not due to lack of orders but rather to manufacturing complications. Ford sales were stimulated to a marked degree by the most recent price cut and the company has sufficient orders on hand now to keep it going at capacity until Nov. 1. Dodge, Studebaker, Buick, Nash and Reo are behind on deliveries. An indication that

CLEVELAND TO HOLD ENCLOSED CAR WEEK

The group of large cities which are planning an Enclosed Car Week in October has been joined by Cleveland.

The dates of "weeks" so far decided upon are:

Kansas City	Oct. 8-15
Detroit	Oct. 8-15
Syracuse	Oct. 15-22
Buffalo	Oct. 15-22
Louisville, Ky.	Oct. 15-22
Cleveland	Oct. 17-23
Rochester	Oct. 24-29
Brooklyn	Oct. 25-29

Is your city going to hold an Enclosed Car Week? Send in your dates to Motor World.

Note—Read *How to Stage an Enclosed Car Week* on page 16.

the companies in the higher priced class are feeling the beneficial effects of the generally brighter outlook is found in the fact that September will be the best month the Lincoln Motor Car Co. ever has had.

The entire industry is centering its attention to a greater degree than ever before on the question of service and the needs of car owners. This probably will result in fewer complaints in the future about high upkeep costs and unsatisfactory repairs.

Jackson Prices Lower

JACKSON, MICH., Sept. 26—The Jackson Motors Corp. has made the following reductions:

	Old	New
4 passenger touring	\$2,685	\$2,285
5 passenger touring	1,950	1,635
Coupe	3,750	2,985
Sedan	3,750	2,985

Reduction by Saxon

DETROIT, Sept. 26—The following price reductions are announced by the Saxon Motor Car Corp.:

	Old	New
2 passenger roadster	\$1,545	\$1,345
5 passenger touring	1,495	1,295
Coupe	2,295	1,995
Sedan	2,295	1,995

R. & V. Knight Makes Cut

EAST MOLINE, ILL., Sept. 27—Reductions have been made on the R. & V. Knight, Model R, as follows:

	Old	New
5 passenger	\$2,150	\$1,500
Coupe	2,850	2,650
Sedan	2,950	2,750

MAY RECOVER CARS BY PAYING STORAGE

Federal Court Ruling Affects Seizures by Government Under Volstead Act

BRIDGEPORT, CONN., Sept. 26—Automotive interests regard as of much importance the ruling of Judge Edwin S. Thomas of the United States District Court at New Haven, to the effect that dealers who have sold cars on the installment plan, which have been seized by the Government for being used to transport liquor, may secure possession of the cars upon payment of the costs of the storage and other incidentals to the seizure, providing the amount due to the lien holder is not offered when the car is put up for sale at public auction. The ruling was made after the question had been brought to his attention by Assistant District Attorney George H. Cohen, who explained that there were several cars being held by the Government which could not be sold for enough to pay the balance due on them.

Dealer Retained Title

The law provides that when the automobile or other vehicles is taken while used for transportation of liquor illegally it shall be forfeited to the Government and sold at auction. It developed in the early days of the seizing of cars, however, that a majority of the cars seized had been bought on the installment plan and the dealer selling the car retained title to it until the amount was fully paid. Orders for the sale of such cars provided that lien holders should be paid the sum due them out of the price realized by the sale of the car. Consequently, when offering the cars for sale, United States Marshal Palmer has named the amounts due on the former liens as the lowest bid he would consider. Frequently the driver of the "rum running" vehicles have used the cars so roughly that when they are offered for sale they are little more than "scrap."

Picard Joins Manufacturer

NEW YORK, Sept. 26—R. A. Picard, for several years sales manager of A. J. Picard & Co., automotive equipment jobber here, has resigned to become sales manager of the Metal Stamping Co., Long Island City. Picard has been active in association work in the jobber field, having been secretary of the standardization committee of the Automotive Equipment Association and secretary of the Eastern Automotive Equipment Association. He served in the World War as an officer in the Motor Transport Corps.

Parts Makers Look for New Era

SEE FIRMER PRICES IN PARTS REDUCTION

*Competition Is Expected to
Eliminate Hesitancy by
Buying Public*

DETROIT, Sept. 26—Important price revisions among leading unit parts makers, announced to the industry in the past week and effective almost immediately, are expected to place the assembled car and truck business upon the firmest price foundation that it has known since 1917.

In the opinion of the unit makers, their concessions will be followed at once by reductions in the prices of assembled cars and trucks, and the prices so announced will be absolutely stabilized for a long time to come. Car and truck makers whose present prices have anticipated the new concessions will show a smaller reduction than in the case of products which have awaited definite action by the parts makers, but it is regarded as certain that there will be general revisions all along the line.

There is a feeling that the reductions in the assembled products will result at least temporarily in an era of competition between the all-factory built and the assembled product, which will bring the industry as a whole immediately to a point where hesitancy in buying on the part of the public will be eradicated as a factor in withholding business.

In announcing the price revisions to the trade, the parts makers are doing so with the knowledge that comparison with the basis of prices in 1917 will show not only that they have again reached that level, but in many instances are actually below them. In return, the revision of prices by the assemblers is expected to show the buying public a similar favorable comparison and restore buying confidence.

Underwriters Take Up Car Risks

NEW YORK, Sept. 27—Important changes in the rules of automobile insurance are expected to result from the meeting of the National Automobile Underwriters' Conference being held here to-day. It is understood that the steps taken by the conference will be along the lines of separating poor risks from others. This program will be similar to that indorsed by the National Automobile Chamber of Commerce. The problem of rating cars according to make and model is well in hand. It is stated that improved methods of keeping loss histories of insured owners and of checking up facts presented in connection with claims are logical safeguards of unlimited application.

EACH ELEVENTH SMITH WILL BUY AUTOMOBILE

DETROIT, Sept. 26—Eleven and five-tenths per cent of the Smiths are buying automobiles this fall and winter.

This information was elicited by a leading farm journal by sending out questionnaires to the 12,824 Smiths listed among its 1,100,000 subscribers. The idea of this means of getting a line on what farmers were going to do with their money suggested itself to a man named Smith in this journal's research department.

By applying the percentage of Smith car buyers to its total subscription list, the journal estimated that 126,500 cars will be purchased by its 1,100,000 readers. Of this number the questionnaire revealed that 116,200 had already determined upon the make of car they will purchase.

N. A. D. A. TO ORGANIZE PENNSYLVANIA DEALERS

ST. LOUIS, Sept. 26—Preliminary work for the organization of state dealer associations in Pennsylvania and New York has been completed by the National Automobile Dealers Association. Delegates from local associations in Pennsylvania will meet at Harrisburg, October 5, to adopt a constitution and by-laws and arrange for a state convention to be held in the Capitol in that city in November. In New York state, delegates from local associations will meet in Syracuse about Nov. 20, when preliminary organizing steps will be taken and plans made for a general convention probably to be held in December.

Final work on the preliminary organizing plans for these two states has been completed by P. F. Drury, assistant general manager of the National Automobile Dealers Association, who has visited local associations in a number of cities during the past two weeks. In Pennsylvania Drury brought about affiliation of the Scranton and Wilkes-Barre associations with the National. In New York City he conferred with Walter A. Woods, president of the Automobile Dealers' Association, Inc., of New York.

Eastern A. E. A. Meets

NEW YORK, Sept. 26—The eastern Automotive Equipment Assn. held its fall meeting here to-day when several speakers were heard on merchandising subjects among them being Ray W. Sherman, merchandising director of the Automotive Equipment Assn.

HARES MOTORS OFFERS FULL LINE OF TRUCKS

*Has Renewed Its Relations with
Kelly-Springfield in Sales
Field*

NEW YORK, Sept. 26—Although Emlin S. Hare has resigned as president of the Kelly-Springfield Motor Truck Co., and the other representatives of Hares Motors who were officers of the truck company have resigned, it is said that the two corporations have renewed their relations in the sales field and that Hares Motors will continue to offer a complete line of trucks ranging from 1½ tons to 6 tons capacity with a wide selection of wheel bases, frame lengths and gear ratios. Charles Willard Young of Emerson McMillan Co. has been elected president of the truck company to succeed Hare.

Edward, O. McDonnell of this city, who has been appointed general manager of the Kelly-Springfield plant at Springfield, Ohio, is a graduate of Annapolis and during the World War served as a personal representative of Admiral Sims in procuring the material and personnel for the North Sea mine laying project which involved an expenditure of \$40,000,000 for material.

A statement by Hares Motors in reference to its future plans states that abrogation of the Locomobile and Mercer contracts will not interfere in any way with its original plans, which call for the production and marketing of passenger cars to sell for \$1,700, \$2,500 and \$4,500.

Hares Motors of New England has taken over the distribution of the Saxon car.

Chamberlain Touring Wisconsin

MILWAUKEE, Wis., Sept. 26.—For the benefit of the 1000 employees of the service stations operated by the seventy members of the organization, the Milwaukee Automotive Dealers' Association has brought to this city P. E. Chamberlain, who is now touring the United States as a lecturer on "Service." Chamberlain will give a series of four lectures, commencing to-day and closing Thursday, Sept. 29.

Chamberlain, late in August, made his first appearance in the rôle of a lecturer in Wisconsin, giving a series of three lectures before the members and employees of the Green Bay Automotive Dealers' Association at Green Bay, Wis., which comprises distributors, dealers and garagemen in about five counties in northeastern Wisconsin.

Several other local associations affiliated with the Wisconsin Automotive Dealers Association are negotiating with Chamberlain to present his lectures.

SHOWS WILL REACH ALL PARTS OF TEXAS

Dealers Plan to Follow Them With Intensive Selling Campaigns

DALLAS, Sept. 26 — If automobile shows will have anything to do with boosting the business in Texas this fall and winter, distributors and dealers are going to keep the business going right through the "lazy months." They are of the opinion that one of the best ways to interest people in automobiles and kindred lines is to keep the latest products right before the people and have them demonstrated to a degree that will command interest and attention. Hence the dealers of Texas have arranged for a series of shows in every part of the State during the next sixty days.

The big automobile show at Amarillo will be held the latter part of this month. The show at San Angelo will also be held the latter part of the month. Denison will hold a show during the present month and probably Wichita Falls will have one the first week in October.

The first big show, and probably the most complete to be held in Texas this fall, will be that at the State Fair of Texas, Oct. 8 to 23. This will be of an international scope because Mexico will be here for automobiles and trucks, also trailers and tractors.

The next big automobile show in Texas will be that at Waco, held by the dealers of central Texas in conjunction with distributors. This will be during the life of the Cotton Palace—about fifteen days. Following the Waco show and coming early in November will be the big exhibition of the south Texas dealers at Houston during the carnival. This show will last for a week. R. S. Kerr is in charge of the arrangements. After the Houston show there will be one at Beaumont in connection with the east Texas fair. This will be about the middle of November.

While not in Texas, Shreveport is right on the line and many east Texas dealers will have exhibits at the fair there late in November. The arrangements for the Shreveport show have not been completed. It is reported that San Antonio dealers will join with those of southwest Texas and stage a big show during November. El Paso will probably have her fall show during the month of October. Dealers of New Mexico and Arizona will participate in this exhibition.

The Texas dealers are going to follow up these shows with intensive selling campaigns, and they expect to conclude the year with the biggest business in their history.

No Road Bill Before Oct. 4

WASHINGTON, Sept. 26—No action will be taken on the highway appropriation bill until the House reconvenes on

Oct. 4. Under the gentlemen's agreement the House will take three day recesses until October, when it will settle down to business. It is expected that difference between Senate and House bills will be smoothed out without delay because practically all highway construction dependent on Federal funds will be held up until these appropriations are available. Hope has not been abandoned for the establishment of a Federal Highway Commission altogether, although it is known nothing along this line can be expected in a legislative way at this session.

SALES HOLDING UP IN NEW YORK AREA

NEW YORK, Sept. 26—New passenger cars numbering 4566 were sold in August in ten counties in and around New York, as compared to 5843 in July. The August sales included 4216 in the class approximately below \$2,500 and 350 in the class above that price. For the eight months ending Sept. 1, the total registrations were 34,991.

Registrations, equivalent to sales, in the ten counties, month by month throughout the year, were:

	Approximately below \$2,500	Approximately above \$2,500	Total
January	483	146	629
February ...	1409	210	1619
March	3396	488	3884
April	4811	575	5382
May	5468	584	6052
June	6522	490	7012
July	5457	386	5843
August	4216	350	4566

September sales, to date, are a little below August, with price fluctuations having an influence. However, sales are gaining day by day.

SALESMEN GIVE PURSE IN BEST RECORD TEST

BIRMINGHAM, Sept. 26—The Parker Motor Co. is conducting a salesmanship contest which will end Oct. 1. The salesmen of this firm had got together and chipped in a nice little purse which was to be given to the man hanging up the best record for the month of September. The management heard of the men's idea and came forward with three purses to add to the one already put up. The company on Oct. 1 will give to the man making the most sales in volume \$100; to the man selling the greatest volume of used cars \$75, and to the man selling the greatest number of new cars with no trade-in of an old car \$50.

WILLYS-OVERLAND DISTRIBUTERS OUT?

NEW YORK, Sept. 26—Reports in circulation among wholesale and retail representatives of Willys-Overland, Inc., are to the effect that the company is about to eliminate the distributor from its plan for marketing Willys-Knight and Overland cars. It is said that dealers will operate directly under branch sales managers.

NEW YORK PLANNING STATE ASSOCIATION

National Association Will Assist in Project Launched by Syracuse Dealers

SYRACUSE, Sept. 26 — Preliminary organization of a New York State Association of Automobile Dealers will be made at a meeting here Nov. 21, according to plans endorsed by members of the Syracuse Automobile Dealers Association at its semi-monthly luncheon this week. The formation of the State association will be backed by the national association, which will send Harry G. Moock, general manager, and two or more assistants here to handle the project.

Associations in New York, Brooklyn, the Bronx, Rochester, Binghamton, Albany, Elmira, Utica, Watertown and Niagara Falls are expected to send representatives to the big meeting here next month and tentative plans call for a big mass meeting of dealers of the State in the assembly chamber at Albany in December, in furtherance of the campaign. All-around betterment and standardization of business is sought through the organization of a State body.

Plans for Enclosed Car Week here beginning Oct. 15 were furthered at the meeting this week. Howard H. Smith, secretary of the local association, who has just returned from the convention of association managers and secretaries in Chicago, reported that at least 20 large cities will participate in National Enclosed Car Week Oct. 15-22, the outgrowth of the enclosed car event held in Syracuse last fall.

All Syracuse showrooms will be specially decorated for the event and there will be a prize contest of some description to stimulate all to greater effort. A big parade of enclosed cars will be given on the evening of Oct. 15, with all cars decorated and lighted. Two bands will provide music in the procession and it is probable a concert program will be given at some central place.

Further details will be settled upon at an extra luncheon next Monday noon, when committees will report and each dealer will present the features he would like to have incorporated in the Enclosed Car Week events.

Officers of the local association will be elected at the annual meeting of stockholders at the Chamber of Commerce.

Thomas Sets World Record

PARIS, Sept. 23 (By Cable)—An average speed of twenty-two miles an hour was made by Rene Thomas driving a Talbot-Darracq in winning the race at LeMans for cars equipped with engines not exceeding 91 cubic inch piston displacement. This speed established a new world's record for cars of that class. Guinness was second in the race and Segrave third, both driving Talbot-Darracqs. The race for cycle cars with engines of 67 cubic inch piston displacement was won by Lombard, with a four-cylinder Salmson, who averaged 54.7 miles.

CHANGE IN PEERLESS CONTROL IS PENDING

Collins Will Pay \$50 a Share for at Least 50,000 Outstanding

CLEVELAND, Sept. 26—Negotiations for the acquisition of control of the Peerless Truck & Motor Corp. by R. H. Collins, former president of the Cadillac Motor Car Co., and his associates have not been concluded, although the indications are said to be favorable to a successful termination of negotiations.

While no announcement as to details has been made by any one participating in the negotiations, information concerning it became available when circulars that are to be mailed to stockholders were seen. These are to be put in the mails when necessary signatures to the contract are obtained. The circular says that the negotiations at present are limited to B. G. Tremaine, president and general manager of the corporation, and his associates, who are now virtually in control of the management of Peerless and its subsidiaries, and R. H. Collins, acting for himself and his associates for the sale of shares of stock in the corporation. W. C. Durant, former president of General Motors Corp., is allied with Collins. Another well defined report is that Collins will assume active management and that his word will be law as to whether or not there shall be changes in the personnel of the officers and directors.

To Notify Stockholders

All stockholders of the company are to be given an opportunity to sell their stock to Collins and his associates. Tremaine stipulated this should be done, and his proposal has been accepted. Collins, according to information contained in the circular notices that are ready for mailing to stockholders, is to purchase at least 50,000 shares and not more than 80,000 shares of the 200,000 shares outstanding. He is to pay \$50 a share for the stock, of which not less than \$10 a share shall be paid in cash and the balance in six equal installments, which shall be paid semi-annually over a period of three years with interest at 6 per cent.

Stockholders who desire to sell on the terms given will be asked to deposit their shares with the Cleveland Trust Co. In the event that more than 80,000 shares are deposited under the agreement, the amount of each stockholder's stock to be sold shall be such proportion as 80,000 shares will bear to the total number of shares of such stock deposited. Thirty days are given for the consummation of the sale under the depository agreement, provided, however, that the attorneys may grant an extension to not later than Nov. 15.

The Peerless company is one of the largest and most prosperous automobile plants in the Cleveland district. When



Motor Car Exhibition at Indiana State Fair

The automotive displays at the Indiana State Fair indicated that farmers in that section are coming back into the market for cars, trucks and tractors. This shows how the large auditorium devoted to displaying motor cars appeared

operating normally it employs 2500 men. The plant covers 20 acres, and it has continued its payment of dividends this year.

Durant Motors Not Involved

NEW YORK, Sept. 27—W. C. Durant personally is associated with R. H. Collins in the negotiations for control of the Peerless plant but Durant Motors, Inc., is not involved. In this respect the relations of Durant with Collins are no different than they have been since the announcement several months ago when Collins left the General Motors Corp. that he would incorporate a Michigan company to manufacture a high class eight cylinder car.

Soon after the original announcement of Collins' plans he purchased one of the large units in the old Cadillac plant at Detroit. If his offer to the Peerless company is accepted the Detroit factory will be used for other purposes which he has in mind.

Acquisition of a well equipped factory such as that of the Peerless company will give Collins an opportunity to get to work at once with the organization he already has built up. His proposal to the Peerless company contemplates the complete redesigning of the car with the exception of the 8-cylinder engine, which he regards very highly. It is probable that in this redesigning he will put into effect most of the ideas he has had for a new car.

G. M. C. Declares Dividend

NEW YORK, Sept. 26—Directors of the General Motors Corp. at a meeting here declared a dividend of 25 cents a share on the common stock, \$1.50 on the 6 per cent preferred, \$1.50 on the 6 per cent debentures and \$1.75 on the 7 per cent debentures, payable Nov. 1.

LINCOLN SALES GROW, ESPECIALLY IN SOUTH

DETROIT, Sept. 26—President H. M. Leland of the Lincoln Motor Car Co. told his dealers who had assembled here this week for a sales conference that the company had definitely turned the corner and that its business now was at a higher mark than at any time heretofore. He predicted that general business conditions would brighten in the near future.

R. C. Getsinger, general sales manager, said that September business was running far ahead of any previous month. Ninety cars were shipped in the first week, which was a record, and it is expected the total for the month will reach 400. October is expected to exceed September. The company is behind in deliveries of certain models.

An unusual condition reflected in the sales was the growth of business in the South because of increased popularity of the high priced cars in that section. There have been many applications for sales rights, and many have been granted. New York, Philadelphia, Chicago and California cities have been high in sales. Special mention also was made of Grand Rapids, Dayton and Springfield, Mass., as sales centers.

No Curtailment by Ford

DETROIT, Sept. 26—Reports that the Highland Park plant of the Ford Motor Co. would be operated hereafter on a five-day basis are emphatically denied. The plant was closed Saturday to balance stock, but work was continued as usual at all branches. The monthly production schedule has not been changed because orders in hand insure production on the present 100,000 monthly basis.

OHIO DEALERS FIND GROWING CAR DEMAND

Most Sales from Cities, with Improvements Noted in Farming Sections

COLUMBUS, Sept. 26—An increased demand for passenger cars, especially those ranging in price between \$800 and \$2,200, is reported by dealers in central Ohio. The better business, which started shortly after the middle of the year, is continuing and the movement to better things is apparently gaining momentum. While a large majority of the sales are from the city proper or the larger towns in the district, still there is an improvement noted in the demand from agricultural districts. This demand is not very large as yet, but there is a decided betterment in the feeling among the farmers. On the whole, the corn crop in the Buckeye State was much better than was expected earlier in the season. Rains which fell in July and early August brought out the crop to a large degree. This is reflected in the purchasing power of agriculturalists and some dealers are experiencing a better trade in farming communities.

Unemployment in Columbus and other industrial centers in Ohio is decreasing. Buying at retail stores is improving, showing that the worst of the slump is over. Automobile dealers are receiving more calls from people who walk into their salesrooms and inquire about the makes of cars handled. This is taken as a good indication of better things. Prospects are still numerous and salesmen are busy calling on them. It is not as difficult a matter now to get the name on the dotted line as was the case in June and earlier.

Truck dealers are still having a slow trade, but signs of improvement are visible. This is especially true of the lighter trucks and delivery wagons. A number of sales of that character are being made. Heavier trucks are slow and little demand has developed, but it is believed that some business will appear soon as many large concerns are gradually increasing their hauling department as freight is getting heavier. Heavy trucks for sand, gravel and heavy materials are not in good demand as there appears to be an oversupply.

Repair work is fairly active at many of the larger shops and at service stations. In fact, there is a distinct improvement in the volume of repair work in the past few weeks. Parts are also in good demand.

RESUMES NEGOTIATIONS FOR YOUNGSTOWN PLANT

CLEVELAND, Sept. 26—It is understood here that F. A. Seiberling, former president of the Goodyear Tire & Rubber Co., has resumed his negotiations for the purchase of the plant of the Republic Rubber Co. of Youngstown which

is now in the hands of a receiver. Some time ago, it was stated, Seiberling made an offer of \$2,500,000 for the factory. This proposal is said to have been satisfactory to the stockholders but the creditors did not think the sum adequate. Since that time a new creditors' committee has been named. Seiberling recently visited the plant of the Portage Tire & Rubber Co. at Barberton which is in bankruptcy. This would seem to lend additional weight to the report that he proposes to establish a chain of rubber plants through the Middle West.



Harry G. Okamura

Working as a mechanic in the shop of the Selden Motor Truck Co., New York City, Okamura is learning the service business by getting into the grease and grime and experiencing all the griefs of skinned knuckles and backfiring engines. He is a graduate of two colleges, and when he has completed his practical education will return to Japan and open up a series of automobile shops in the Flowery Kingdom.

EFFICIENCY PROMOTED BY IMPROVING LAYOUT

SPRINGFIELD, OHIO, Sept. 27—Cutting stock and increasing the rate of turnover on accessories and parts is one way the W. A. Kelly Co., local Ford distributor, is economizing and adding to its revenue. Tentative plans have been formulated by which accessories layout and the service shop will be separated under which it is aimed to check loss of time by employees in both departments as a result of unnecessary talk. At present these two departments are handled from the same enclosure. The plan is to move the accessories to the front of the building and keep the service and repair shop to the rear.

Complete equipment for taking care of Ford cars has been installed for some time. The overhead expense is about the same as last year, but more business is being handled.

USE SPEAKING TUBES FOR CITY PROSPECTS

Apartments Reached in Campaign to Sell 5000 Cars in Year

CHICAGO, Sept. 26—In connection with its sales campaign to place 5000 cars in Chicago within the next 12 months, the Dashiell Motor Co., Dodge Brothers distributors in this city and surrounding territory, has started a house to house canvass for prospects.

To simplify the big canvass, the city has been divided into sections of four city squares each. These territories are under the care of junior salesmen who are expected to return 50 reports each day. These canvassers at the same time will be given careful training in salesmanship, and those who survive the campaign with commendable records will be given further training and will be continued as regular salesmen for the company.

The difficult problem of reaching the dwellers in large apartment houses will be overcome to a large extent by asking six questions through the speaking tubes in the vestibules of the buildings.

Do you own an automobile?

What is the make? Type? Year?

Are you interested in our special trading proposition?

Will you be in the market within the next six months?

The answers to these questions will determine whether the report is to be classed as a prospect. A high powered salesman will follow up each favorable report.

TEN MORE STATES ADD GAS CONSUMPTION TAX

NEW YORK, Sept. 26—Ten new States, bringing the total to 14, added taxes on gasoline consumption at the 1921 sessions of their legislatures. A report on this subject compiled by Harry Mixell, secretary of the motor vehicle conference committee, shows that this action will add at least \$6,000,000 to the taxes paid by motor vehicle users.

When the present year began, the four States which had a gasoline tax were Colorado, Kentucky, New Mexico and Oregon. The States which added the tax this year were Arizona, Arkansas, Connecticut, Florida, Georgia, Montana, North Carolina, Pennsylvania, South Dakota and Washington. The tax is one cent a gallon in all States except New Mexico, where it is two cents.

The chief objection to the imposition of a gasoline tax is that it is discriminatory and adds another impost to the "stigma taxes," which have been inflicted on the industry. The tax also discriminates against motor vehicles propelled by internal combustion engines and in favor of those driven by steam or electricity. It is probable that agitation over a gasoline tax will be taken up in several other States at the coming sessions of their legislatures.

IOWA FARMERS AWAIT LOWER FREIGHT RATES

Price Revisions Have Served to Stimulate Business Among All Dealers

DES MOINES, Sept. 26—It is difficult to express on paper an accurate statement of business conditions in the motor trade of Des Moines and Iowa at the present time. On one hand, the Herring Motor Co., long established Ford dealers, report that the month of August, so far as car sales were concerned, was the largest that company has even known. Another Ford dealer reports sales of 144 cars in Des Moines during the month.

Over against this is the case of other dealers who, while they report that business has held up to a point even with or above the expectations, admit that many of them will do well if they "stick it out" through the winter.

The unusual Ford business referred to cannot be entirely attributed to price cut stimulation, as the last Ford cut did not come until late in August. Ford business seems to be better in Des Moines than it is in some other cities in Iowa, and this may be accounted for partially by the fact that Des Moines has been without street car service since Aug. 3. It is also admitted by dealers that many prospective buyers who in normal times would buy higher price cars want transportation, and are therefore buying Fords.

There is little question but that price cuts have served to stimulate business among all dealers. A dealer who sells one of the higher priced cars advises that prospects for a fairly good enclosed car business during the fall were good.

There is no improvement in the condition of the business among farmers, and dealers do not anticipate any until freight rates come down and the retailer takes a greater portion of his losses.

C. L. Herring of the Herring Motor Co. states that the accessory business during the past sixty days had not held up to the car business. Repairmen and garagemen report the biggest business in their history, which is taken to mean that car owners are making major repairs with the idea of making cars go the full limit.

TWENTY-THREE MAKES AT COMMODORE SALON

NEW YORK, Sept. 27—Twenty-three makes of American and foreign high grade cars will be exhibited at the automobile salon which will be held at the Commodore Hotel, this city, from Nov. 27 to Dec. 3 and at the Drake Hotel, Chicago, coincident with the National Automobile Show there the latter part of January. There will also be ten custom body builders. Because of the demand for space cars will be exhibited in the lobby and on the mezzanine balcony of the Commodore as well as on the entire second floor.

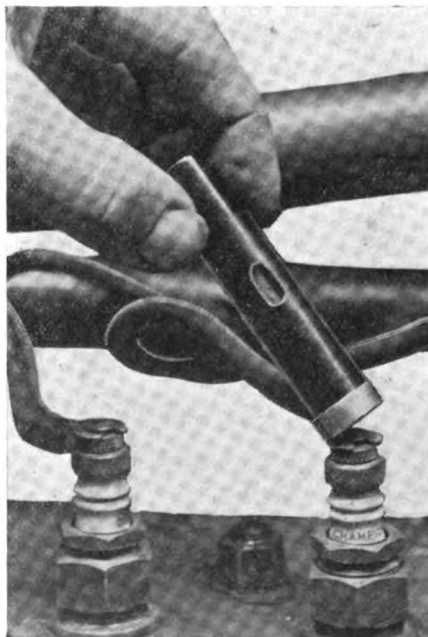
NATIONAL SHOW SPACE DRAWING ON OCT. 6

NEW YORK, Sept. 22—The annual members' meeting of the National Automobile Chamber of Commerce at which space is drawn for the New York and Chicago shows will be held at headquarters in this city Oct. 6. Prior to the luncheon which will precede the space drawing, Magnus Alexander of the National Industrial Conference Board will address the members. A convention of truck manufacturers represented in the chamber will be held Oct. 7, at which the problems of that branch of the industry will be discussed.

Cars already entered are the following: Brewster, Cunningham, Daniels, Delage, Dorris, Duesenberg, Fergus, Fiat, Lafayette, Lancia, Lincoln, Locomobile, MacFarlane, Mercedes, Minerva, Packard, Panhard, Pierce-Arrow, Renault, Rolls-Royce, Stevens-Duryea, Sunbeam and Winton. The German-made Mercedes appears for the first time since 1914. Five of the American cars will make their salon debut. Space for custom coachwork exhibits has been taken by Brewster, Brooks-Ostruk, Fleetwood, Healey, Holbrook, Locke, New Haven Carriage Co., Smith-Springfield, United Body and the Walter M. Murphy Co.

Wills Predicts Gains

DETROIT, Sept. 26—Reports at the first meeting of distributors for C. H. Wills & Co., held at Marysville, indicate that business would show steady gains. E. C. Morse, the new sales manager of the company, was introduced to the distributors and outlined the policies which would govern him in his handling of the business.



How the Airco gage is used

KEEN MERCHANDISING METHODS BOOM TRADE

Ohio Bankers Report Automobile Business Better Than Any Other Line

CLEVELAND, Sept. 26—The retail automobile business here is in better shape than is any other retail line, according to expressions heard at the annual meeting of Group 9 of the American Bankers Assn., which was held last week at Chippewa Falls.

Bankers throughout the northern tier of Ohio counties attended the gathering and all practically reported that the retail automobile dealer was giving less trouble with financing demands than the other lines of merchandising. Trade is brisker with automobile dealers than it is with the average retail merchant in other lines, according to reports from this city, Akron, Ashtabula, Sandusky and Lorain.

The large reductions that were made in the prices of all makes of cars were said to be responsible largely for the condition in the trade and credit also was given for smart advertising and keen merchandising methods. Bankers were urged to do what they can to continue reductions in the prices for material and labor, and also to encourage buying. This appeal was made by H. K. Ferguson of the H. K. Ferguson Co., of this city.

F. C. VanCleaf of the B. F. Goodrich Co., Akron, said that while the rubber industry has experienced its share of trouble, yet it has not gone through an experience more trying than has the average industry. Tire sales the first seven months of the present year were on an annual 5,000,000 unit basis as compared to 33,000,000 units in 1920. July 31 there was less than one and a half month's supply on hand, while consumption was going on undiminished.

Airco Ignition Gage Uses Neon, a Rare Gas

A new use for neon, a gas which is found in minute quantities in the atmosphere, has been found in the Airco ignition gage, marketed by the sales department of the Air Reduction Co., which is the Edward A. Cassidy Co., Inc., 280 Madison Avenue, New York City. The passage of an electric current causes the gas, which is enclosed in a glass tube, to glow differently under different conditions. When the gage is applied to a spark plug terminal, the tube glows a medium orange if conditions are as they should be, while if the electrodes are too close or are fouled with carbon, the glow will be dim. If the electrodes are too far apart the glow will be brilliant, and in the case of a short circuit there will be no glow at all. The gage will also function as a tester for breaks in insulation, glowing brightest at the point of break. The price of the gage is \$1.

ALL SPACE IS TAKEN FOR BIRMINGHAM SHOW

*Only Cars That Are Handled by
City Dealers Accepted for
Exhibition*

BIRMINGHAM, ALA., Sept. 26—Definite plans have been completed for the Birmingham automobile show, which will be held in conjunction with the Birmingham Semi-Centennial, Oct. 24 to 29, inclusive. Practically all space in the gigantic tent that will be allotted to the show has been taken. Tractors, ancient and modern cars of every make and nearly everything in the automobile line will be on display for inspection by President Harding, who will attend the celebration of Birmingham's birthday, and the thousands of others.

No part of the tent will be seen, the sides and walls being covered with floral and artistic cloth and paper designs. It will be a city block in length and the width of the street, which in Birmingham will be about 75 by 650 ft. In the tent will also be held a fashion show and industrial exhibit.

There will be no restrictions placed upon entries to the show except that the make of car be handled by a Birmingham dealer. E. W. Brownell is chairman of the committee preparing for the show. He has held several meetings of his committee and perfected plans down to the smallest details.

The plans call for having the automobiles displayed about the center of the tent where all passing toward the fashion show, which will be featured by showing of new styles designed by Lady Duff-Gordon and worn by models to be selected by the Actors' Equity Assn. of New York, will see them.

STANDARD TRUCK CUTS AVERAGE 15 PER CENT

DETROIT, Sept. 26—Price reductions averaging 15 per cent on its entire line have been made by the Standard Motor Truck Co., the announcement being based upon a general reduction determined upon by leading parts makers, and by manufacturing economies effected through higher labor efficiency.

The new Standard prices are:

	New	Former
Model 1-K 1-1½ ton.....	\$1,800	\$1,950
Model 76 2½-3 ton.....	2,000	3,100
Model 66 3½-4 ton.....	2,800	4,000
Model 5-K 5-7 ton.....	4,400	5,250

Under the influence of lower prices a much more active demand in heavy duty trucks is looked for by Standard in the remainder of the month of September with probable increase in October and the early winter months. August without any particular sales stimulus proved to be the best month the company has enjoyed in a year.

British Car Lower

LONDON, Sept. 5 (By Mail)—The latest British car to reduce its price is

the Lanchester Six, rated at 40 horsepower. The chassis price has been cut from \$11,000 (normal exchange) to \$9,750. The decline in the prices of American cars is averaging higher than the new price on British makes.

The 12 horsepower Rover, the design of which has been changed but little since the pre-war days, has been reduced from \$3,675 to \$3,125 for the two seated model; from \$3,775 to \$3,250 for the touring car and the closed models from \$4,375 to \$3,775.

Atterbury Prices Drop

BUFFALO, Sept. 23—The Atterbury Motor Car Co. of Buffalo announces new prices on its various truck models, effective Oct. 1. The prices are f.o.b. Buffalo and do not include the United States war tax. The prices are:

	New Price	Old Price
1½ ton.....	\$2,475	\$2,775
2½ ton.....	3,175	3,375
3½ ton.....	3,975	4,175
5 ton.....	4,975	5,575

Stephens Reduced

FREEPORT, ILL., Sept. 27—The Moline Plow Co. has announced that the Stephens' Motor Works has reduced prices on the Stephens Salient Six, effective Oct. 1, as follows, all prices f.o.b. this city:

	Old Price	New Price
Touring, Model 96..	\$2,065	\$1,850
Sedan, Model 95.....	2,100	2,850
Touring, Model 94.....	1,985	1,850
Sedanette, Model 93.....	3,100	2,850
Roadster, Model 92.....	1,900	1,800
Special, Sport Model 94..	2,085	1,950
Special, Model 92.....	2,000	1,900

Further Cut by Anderson

ROCK HILL, S. C., Sept. 23—The Anderson Motor Car Co. announces another cut in prices on its various models. It covers the new line which is now being turned out. Economies in manufacturing and distribution have made the cut possible. The price list follows:

	New Price	Old Price
5 passenger touring....	\$1,650	\$1,795
7 passenger touring....	1,795	1,845
Coupe	2,450	2,795
Sedan	2,550	2,795

No change has been made in the price of the two-passenger speedster, which remains at \$2,195.

New Prices for Allen

COLUMBUS, OHIO, Sept. 26—The Allen Motor Car Co. has reduced prices on its touring, roadster and sedan models. The old and new prices follow:

	Old	New
Touring	\$1,385	\$1,195
Roadster	1,385	1,195
Sedan	2,195	1,845

Merit Reduction, \$260

CLEVELAND, OHIO, Sept. 26—The Merit Motor Co. has reduced the prices of its two passenger and four passenger models from \$2,245 to \$1,985.

PRICE CHIEF TOPIC WITH COAST DEALERS

*Revised Quotations Affect Advantagously Sales of
Smaller Cars*

PORTLAND, ORE., Sept. 26—Price has again become the all-prevailing topic of interest along the automobile row in Portland, as a result of the reductions announced by leading makers of small cars, and the feeling of stability that had just about reached the industry here has vanished into thin air. Buyers are watching out for further drops.

So far as the Ford, Chevrolet and Overland are concerned the price drops have been advantageous and sales have been heavier since the new quotations than for a considerable time past. During the latter part of August there was a considerable drop in Ford sales, for no particular reason, apparently, but with the new figure the dealers are kept busy handing the cars over the counter to eager buyers. Sales reports show that since the new prices went into effect as high as 18 or 20 new cars have been sold per day by the six authorized Ford dealers, while shortly before the price drop six or eight per day was a frequent figure.

For the Chevrolet and Overland a boost of sales, in like proportion, has also been noted. An encouraging feature has been a greater demand from eastern Oregon, a farming and stock raising section which during the spring and summer was practically out of the automobile field. One new Ford dealer has been authorized and has already opened up here, while another will open in October, raising the number of authorized dealers from six to eight. The firm already started in business is Armentrout & Wicke, who are moving into a new building in a section not hitherto occupied by any Ford dealer. Both men were formerly with Robinson & Smith, one of the oldest Ford dealers of Portland, Armentrout having been sales manager and Wicke a salesman.

CO-OPERATION PLANNED FOR USED CAR SALES

NEW YORK, Sept. 26—The Automobile Dealers' Association, Inc., at a meeting which was in the nature of a roll call of all members, last week authorized an investigation of the possibilities of co-operative action in handling used cars. The secretary, Thomas F. Moore, was instructed to investigate plans for co-operative appraisal and exchange information on used cars operative in Syracuse and Chicago.

The decision followed an address by Secretary Moore in which he emphasized the extreme necessity that automobile dealers get together on the larger and common problems of the trade instead of trying to work out their destinies along strictly and sometimes harmfully competitive lines.

READJUSTMENT WEEK SUGGESTED BY REEVES

N. A. C. C. Manager Would Follow It with Similar Buying Period

NEW YORK, Sept. 26—Contributing to a symposium in which reviews of representatives of various industries are given, a novel proposal for hastening the return of business to normal is made by Alfred Reeves, general manager of the National Automobile Chamber of Commerce.

"People must be convinced that prices have been stabilized," says Reeves. "Why could not we have a great 'readjustment week' when everyone would readjust prices, to be followed by a great 'buying week' that would tend to speed up the wheels of commerce?"

"The Administration at Washington is, I believe, doing everything possible to bring about these readjustments in orderly fashion. You cannot legislate yourself into heaven, however, and the country's situation was so bad that even so great a leadership and so great an array of men as we have at Washington at the present time cannot bring the readjustment except at a slow and orderly rate.

"Let us have faith in our Washington officials until they prove unworthy.

"Let us take a greater interest in our local municipal affairs where much trouble is brewing because of extravagances.

"Let us have that abiding faith in the future of America that has always been the keystone of our progress, and above all, let us work."

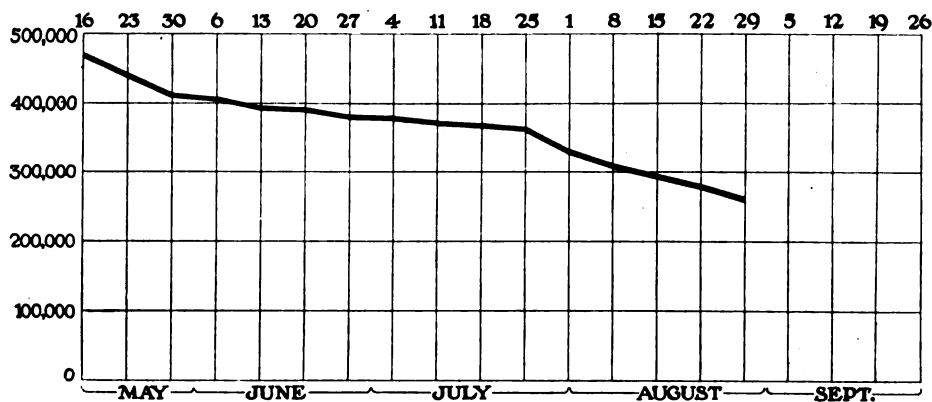
Referring to taxation, Reeves says that,

"Instead of looking for new sources of revenue there is a general feeling that we should find new sources of economy." On the subject of taxation, his view, which is that of the automotive industry, is:

"Let us have a tariff that will produce a fair revenue, but not one that will simply place the burden of the increase on the American public. This country with great productive capacity needs trade. We must expect to buy from foreign countries if we plan to sell them."

G. M. C. CONCENTRATES EXPORT MANUFACTURE

NEW YORK, Sept. 26—Manufacture of all export models with the exception of the Cadillac car and the General Motors truck will be concentrated by the General Motors Corp. at its Canadian plant at Oshawa, Ont. It is stated that concentration of such production at a single point will place one executive in charge of all export production with a better realization of export needs. Its purpose is to produce a line of cars more reliable and more thoroughly tested which for these reasons will be better fitted for foreign trade. Another pur-



Idle Freight Car Record

The black line represents the record of idle freight cars throughout the United States. It is a business indicator of interest to all automotive men, and especially to the truck dealers. When the railroads are busy carrying merchandise it follows that manufacturers and merchants are busy fulfilling the orders of customers. Between May 16 and August 29 the average net car surplusage has shrunk from 469,770 to 258,818, a decrease of 210,952. In the week ending August 29 the shrinkage of surplus cars was 21,943. The chart above shows the gradual downward trend of freight car surplusage since May 16.

pose is to give greater flexibility to the manufacture of such cars, not only because of changes in the manufacturing programs but because of detail necessary to meet export needs.

In connection with the concentration of foreign trade manufacturing in Canada, Paul Fitzpatrick, who is now vice-president in charge of operations for the General Motors Export Co., will be transferred from that organization and made assistant to Alfred P. Sloan, Jr., with duties pertaining to the transfer of operations to Oshawa and the study of all problems incident to them. P. S. Steenstrup, vice-president in charge of sales, will exercise full authority in the export organization, subject to the president, and all personnel heretofore reporting to Fitzpatrick will report to Steenstrup.

ADOPT ANSTED MOTOR FOR NEW DURANT CAR

NEW YORK, Sept. 26—Announcement is made by Durant Motors, Inc., that the Ansted motor, manufactured by the Ansted Engineering Co. at Connersville, Ind., has been adopted for use in the Durant six cylinder car, formerly the Sheridan, which will be placed on the market about Nov. 1. A contract has been placed for the manufacture of a large number of these motors. Although the Ansted Engineering Co. is controlled by the United States Automotive Corp., which is also the holding company for the Lexington Motor Co., the Connersville Foundry Corp. and the Teetor-Hartley Motor Corp., it was stated at Durant headquarters that no significance was to be attached to the use of the Ansted motor in the Durant car beyond the belief by Durant that it is the best motor of its kind available. The motor designed by Durant engineers for use in his four cylinder car will continue to be made by the Continental Motors Corp.

RESULTS CONVINCING AT SACRAMENTO SHOW

SACRAMENTO, Sept. 27—Despite the fact that the Sacramento Motor Car Dealers Assn. did not as an organization handle the automobile show at the State Fair this year, most of the members participated as individuals, and the huge tent in which the show is given every year was filled to capacity. The largest exhibitor was the J. J. Jacobs Co., Studebaker dealers here. This company had twice the space of any other firm and, carrying but the one line of cars where most others are handling two or three, it had a most pretentious display.

Sales results, the exhibitors assert, were convincing with many cars sold during the ten days of the fair. Dealers here are confident the recent price decreases will have the effect of stimulating sales once prices are settled again. At the present time, however, it is hard to bring the public to believe values are anything like permanent.

The automobile show contained some 20 different makes of automobiles, in many models. In another tent accessories and motor trucks were displayed, but the exhibit was not up to expectations in point of the exhibits offered. The "power on the farm" section again was a feature of the fair, the tractor division completely filling a large tent.

WILL FEATURE TRUCKS AT ELECTRICAL SHOW

NEW YORK, Sept. 26—Displays of electric trucks will feature the electrical show which will be held at the 71st Regiment Armory beginning Sept. 28. Figures compiled by the managers of the exposition show that nearly 800 electrically driven trucks have been sold in the boroughs of Manhattan and Bronx in the last three years. The total in operation in the two boroughs at the beginning of the year was 3142.

Activities Among the Dealer Organizations

Form Oroville Unit

OROVILLE, CAL., Sept. 26—Walter W. Biddick, field secretary for the California Automobile Trade Association, has completed organizing the Oroville unit of the state-wide organization. The following officers were elected: Walter J. Sharkey, president; C. D. Records, vice-president; Geo. Chaffen, treasurer; Robert Duncan, secretary-manager.

Arrange South Carolina Meeting

COLUMBIA, S. C., Sept. 26—H. Lee Harvey, who succeeded A. Mason Gibbes as president of the South Carolina Automotive Association, announces that plans are being made to make the annual convention at Greenville one of the biggest and best yet held. The convention is to be held in December. Ray W. Sherman already has accepted an invitation to be present, and it is hoped also to have Alfred Reeves present.

Richmond Plans Get-Together

INDIANAPOLIS, Sept. 26—Plans for a general "get-together" meeting of automobile dealers of Richmond, Ind., and their employees were considered at the regular meeting of the Wayne County Automotive Dealers Association. The next meeting will be held at Whitewater, where a chicken dinner will be served the members by the Ladies' Aid Society of the church. Harry Chenoweth, Paul James and Walter Timmerman are members of the entertainment committee.

Little Rock Abandons Tour

LITTLE ROCK, Sept. 22—Five members of the Little Rock Automobile Dealers Association at a meeting here were appointed to plan the automobile show which will be a feature of the Arkansas state fair and exposition at the City Park Nov. 11 to 19. The association voted to stage the show at the fair after abandoning a plan to tour all the cities and towns within a radius of twenty-five miles of Little Rock. The automobile committee includes: R. B. Black, A. L. Woolfolk, L. E. Whutemore, C. H. Kaulhaber and A. W. Parke, secretary of the association.

Wants Road Work Provision

PHILADELPHIA, Sept. 26—The Philadelphia Automobile Trade Association at a meeting in its headquarters endorsed the proposition for amending the state constitution through the calling of a constitutional convention. The automobile industry is particularly interested in this plan because it desires to see legislation enacted to provide funds for the continuation of the state roads construction work when the present available money is exhausted at the end of the year. At a meeting of the association's board of directors a resolution was adopted favoring the holding of the convention and urging members of the automotive industries to vote in favor of the convention.

Ohio Meeting in December

COLUMBUS, Sept. 23—The Ohio Automobile Trade Association is making elaborate preparations for the coming annual meeting, which will be held here the second week in

December. One of the features of the meeting will be a large display, taking in all of Memorial Hall, consisting of the latest appliances, equipment and supplies for the service station and the garage, as well as all new ideas in the selling of passenger cars and trucks. Applications for space in this display are already being received. The Ohio Accessories Jobbers Association has taken action and will participate in the display. The membership of this organization comprises the leading accessory jobbers of the Buckeye State. The sessions of the convention will be held at the Elks Home, adjoining the Memorial Hall, where the display will be held. The attendance is expected to be the largest at any state convention.

Outing for Portland Dealers

PORTLAND, Sept. 22—Portland automobile dealers and their wives enjoyed the most successful dinner and dance which the automobile fraternity of Portland has had for several years at the Columbia Gorge Hotel last week. The event was under the direction of the Portland Automobile Dealers Association. One hundred dealers and their wives motored to the hotel, which is located on the Columbia River highway sixty-five miles east of Portland. Under the program which was arranged most of the dealers left Portland at about 5 o'clock in the evening, arriving at the hotel about 7:30 o'clock. Dinner was served at 8 o'clock and this was followed by dancing and a musical program. The success of the affair reflects credit on the committee, which was composed of Harry C. Hays, chairman; C. G. Irwin, Del Wright, Lawrence Therkelsen and Jack Crittenden. During the evening it was unanimously voted to hold a similar event again in the near future.

Aim to Reduce Accidents

INDIANAPOLIS, Sept. 22—The Indianapolis Automobile Trade Association is sponsor for a campaign that has for its purpose the reduction of automobile accidents in this city and the education of the public toward becoming more familiar with automobiles. Its chief purpose, however, is to draw from the public its ideas on how to make walking and driving safer here. Prizes aggregating \$500 have been offered in the hope of creating greater enthusiasm for the enterprise. John Orman, manager of the association, is of the opinion that the campaign, which takes the form of a contest, will do much to reduce the automobile accident lists. "The big idea," he says, "is that our contest will cause discussion in every home. And when the folks talk a thing over around the table naturally the discussion impresses itself on the minds of both children and grownups. That's why we are reaching into the home with this campaign of education." According to the plans, there will appear in local newspapers every publishing day for thirty-one days one or two pictures of well-known makes of automobiles. The pictures will be numbered but the name of the car will be nowhere visible. Each day the contestants will try to name the pictures. They will place the name opposite the number of the car and, at the close of the contest, file their answers with the association. With the forty-seven names of cars pictured the contestants must submit a letter of not more

than fifty words in which they will set forth suggestions for safety and the better regulation of traffic in Indianapolis.

Indiana Secretaries Confer

INDIANAPOLIS, Sept. 22—Secretaries of local automotive trade associations in Indiana have met here for a conference arranged by L. M. Shaw, secretary-manager of the Indiana Automotive Trade Association. The purpose of the conference, as explained by Shaw, was to provide the secretaries with first-hand detailed knowledge in the solution of their secretarial problems. The program as originally announced was pretty well covered in the one day, making unnecessary a second day, as originally outlined. Harry G. Moock, general manager of the National Automobile Dealers Association, unable to be present, sent a message in which he spoke of the meeting as the first of its kind ever held within the industry to his knowledge.

Whatever may be the results of this first gathering, the secretaries became so enthusiastic at the great possibilities of the conference that they unanimously voted for another conference Oct. 18. J. F. Frohbieter, secretary of the Evansville Dealers Club; Clem McConaha, secretary of the Wayne County Auto Trade Association, and C. V. Bender, manager of the Muncie Auto Trade Association, were the leaders in the program. Definite and detailed information presented covered arrangement of meeting programs; interesting and bringing in the accessory and battery men; relations of newspapers and association activities; how Muncie dealers were saved \$2,500 in their newspaper advertising cost; how the Wayne County Auto Trade Association has won recognition from the Chamber of Commerce as one of the live wire civic-business groups; handling of small town automobile shows; cash refunds to members for meeting attendance; selection of committees, election of officers and many other important phases.

INSURANCE COMPANIES WILL BE LIQUIDATED

NEW YORK, Sept. 26—Two affiliated mutual insurance companies specializing in automobile insurance are to be liquidated, according to a formal statement by Jesse S. Phillips, State superintendent of insurance, New York. They are the United States Mutual Automobile Casualty Co. and the United States Mutual Automobile Fire Insurance Co., both with head offices at 66 Broadway, New York City. Both companies started only a few years ago. It is likely that the superintendent will lay an assessment on the policy-holders to make up the deficit.

Bell Truck Price Reduced

OTTUMWA, IOWA, Sept. 22—The Bell Truck Sales Corp. has reduced the price of the Bell 1-ton special from \$1,650 to \$1,495. The Bell Truck Sales Corp. was organized some time ago as the sales division of the Iowa Motor Truck Co.

CHANGES IN THE TRADE

W. H. Nichols of South Bend, Ind., has been named as state agent for the National Auto Stores, Inc.

The Daniels Motor Co., Reading, Pa., will build a sales and service station in Philadelphia to cost \$500,000.

The German Motor Co., Ottawa, Ont., has been appointed distributor for the Italian Fiat, the Mitchell Six and the Winton cars.

The Vesper Motors Co. has taken over the distribution of the Dort in Kansas City. D. E. Castle, Jr., is the president of the company.

Fred Wilson, newly appointed sales manager of the Stutz Motor Car Co. of America, Inc., has assumed his duties at the Indianapolis plant.

The Lexington Motor Sales Co., Indianapolis, has redeemed \$10,000 worth of preferred stock and increased its common stock from \$15,000 to \$200,000.

L. K. Rittenhouse succeeded L. I. Ris as eastern district manager of The Star Rubber Co., Inc., with offices at 226 West Fifty-second Street, New York City.

Earl F. Berry, formerly of the sales staff of the Reeks-Nash Co., Milwaukee, has acquired an interest in the Milwaukee Oldsmobile Sales Co., and becomes secretary and treasurer.

The Hendy-Bethman Motor Co., distributing the new Wills-St. Claire, is a new firm in Kansas City, composed of Charles Hendy, Jr., and A. F. Bethman. Peyton Hough is sales manager.

The Koehler-Rahn Co., Milwaukee, has been appointed distributor of the Moon in Wisconsin and northern Michigan. The concern also is distributor of the National and the Elgin Six.

The Tell-Tale Piston Ring Sales Agency, 1512 Vine Street, Philadelphia, has been opened as a direct factory branch of the St. Louis Piston Ring Corp. under the management of N. Lowenthal.

Louis A. Buxton, formerly president and general manager of the Buxton-Wysong Motors Co., Kansas City, has organized the Buxton Motors Co. and has taken over the distribution of the Scripps-Booth in that territory.

The Grover Motor Co., Cleveland, has been organized to distribute the Halladay line for northern Ohio. G. Carl Grover is president and general manager; B. J. Kittinger is vice-president; C. D. Bradford is secretary, and I. Carter treasurer.

George Neill, former motor car dealer and connected with the Los Angeles Locomobile company for several years, will assume charge of the new San Francisco factory branch of the Leach Biltwell Motor Car Co. of Los Angeles Oct. 1.

Frank E. Knickerbocker, formerly in charge of the Flint branch of Samson Tractor Co., is in charge of a new factory branch of Oldsmobile in Lansing, Mich. From this branch, also, J. W. Rapley will handle general distribution in Michigan.

Peter F. Minnock, formerly manager of the Ford assembly plant at Kansas City, has been promoted to the district managership of a territory that includes the assembly plants in Fargo, Minneapolis, Omaha, Des Moines, St. Louis, Oklahoma City and Kansas City.

Peter Entringer, for three years secretary of the Johnson Motor Co., Fond du Lac, Wis., has resigned to form new connections. He is a pioneer dealer of Wisconsin, having been for twelve years in business at St. Cloud, Wis., before joining the Johnson company.

E. C. Eads, one of the first motor car dealers in Missouri, has assumed the management of the Security Motors Co., distributors of the Premier, Columbia and Skelton. He will continue to operate the Eads Motor Co., distributing the Revere and the new Duesenberg Eight.

The Traffic Truck Sales Corp. of St. Louis has established a complete sales and service organization in Kansas City with James Emmett Morley in charge. Associated with Morley are H. A. Hickman and Lee Roy Kemp. Hickman will be office manager, while Kemp will have supervision over the service department.

J. A. Pierpoint has resigned as president of the B. L. P. Motor Co., in Philadelphia, to become distributor in that territory of Auburn cars. He will head a new company to be known as the Pierpoint Motor Co., which will open a sales and service building immediately. H. E. Grant will be sales manager and Howard Brooks service manager.

G. M. C. PLANS CLOSER CONTACT ON POLICIES

DETROIT, Sept. 26—To bring the units of the General Motors Corp. into the closest possible contact on general policies, meetings of the executive committee will be held twice monthly at the big G. M. C. Building here, with either President Pierre S. duPont or one of the executive vice-presidents, presiding.

The operations committee of the corporation, which comprises the manufacturing executives of all units and the executive officers of the corporation, will meet monthly. Complete details of operations, sales and general policies of the many units have been practically definitely worked out at the meetings held to this time and are being made effective at once.

Clark Named Chairman

NEW YORK, Sept. 26—Ezra W. Clark, advertising manager of the Clark Equipment Co., Buchanan, Mich., has been elected chairman of the executive committee of the advertising managers' council of the Motor & Accessory Manufacturers Assn. He succeeds E. C. Tibbetts, formerly advertising manager of the B. F. Goodrich Rubber Co.

Four Trainloads in 100 Days

CHARLOTTE, N. C., Sept. 26—C. C. Coddington Co. has received another trainload of Buick cars, the fourth in 100 days. The last train brought 208 Buick "Fours." All will be delivered as speedily as they can be sent out. Shipment was made on the Coddington special train, built for the purpose and owned by the Coddington company.

BUSINESS PAPER MEN PLAN STUDY COURSE

School of Publishing Will Broaden Service to Readers and Advertisers

NEW YORK, Sept. 26—The New York Business Publishers Association, of which Motor World is a member, has inaugurated a course in industrial publishing which is open to all who are interested in this field. The course is designed primarily for the benefit of members of the editorial and business staffs of trade and technical periodicals. Among the topics covered are: Distinctive features of industrial publishing, its code of ethics, personal qualities required for success, getting the right kind of articles, securing accurate reports and data, building up circulation, creating advertising, departmental management, service to the industry, service to advertisers and basic policies.

"We look upon this undertaking," said H. M. Swetland, president of the United Publishers Corp. and chairman of the educational committee which directed the organization of the course, "as one of the most important steps ever taken toward making industrial papers even more valuable to their readers and advertisers. Our own prosperity will grow in direct proportion to our growth in ability to render useful service. Therefore, it is good business for all of us throughout the industrial publishing field to study the subjects treated in this course. I have myself gained more knowledge of the fundamentals of this business from my work on this course during the past three months than I have gained from any five years of my forty years' experience in this line. That is because the information previously scattered among hundreds of people has been here for the first time collected and put into a systematic, accessible form. I should like to be the first to enroll."

Among the other speakers were Henry H. Norris, managing editor of the *Electric Railway Journal*, who is editor of the fifteen text books of the course; W. H. Lough and David Rosenblum, president and vice-president, respectively, of the Business Training Corp., which will conduct the course, and R. H. McCready, president of the New York Business Publishers Association.

A large number of requests for the introduction of the course in cities outside of New York have been received.

KESS-LINE TO OCCUPY LIBERTY PLANT OCT. 1

DETROIT, Sept. 26—Kess-Line Motors, an offspring of the Kessler Motor Co., will take possession of the former Liberty Motor Car Co. plant here on Oct. 1 and will prepare for the production of the Kess-Line eight.

The factory will afford 70,000 ft. of manufacturing space and will have a production capacity of 60 cars a day.

COMING EVENTS

SHOWS

Memphis	Sept. 24-Oct. 1.	Automobile Show, State Fair Grounds.	Minneapolis	Feb. 4-11.	Annual Automobile Show.
Cincinnati	Oct. 1-8.	Fall Automobile Show, Cincinnati Automotive Dealers' Assn., Music Hall.	Winnipeg	Feb. 6-11.	Automobile Equipment Show, Western Canada Automotive Association.
Salt Lake City	Oct. 8.	Special Meeting of the Inter-mountain Automotive Trades Association. C. C. Backes, manager.	Kansas City	Feb. 9-16.	Kansas City Motor Car Dealers Association, Overland Building. E. E. Peake, manager.
Columbus, Ohio	Oct. 10, 11, 12, 13.	Enclosed Car Show, Columbus Automobile Trade Assn.	Louisville, Ky.	Feb. 20 to 25.	Louisville Automobile Show, auspices Louisville Automobile Dealers' Association.
Flushing, N. Y.	Oct. 10-15.	First Annual Queens County Automobile Show, Armory.	Des Moines, Ia.	Feb. 26.	Winter Automobile Show.
Pittsburgh	Oct. 15-22.	Fall Show under auspices of Automotive Association.	Brooklyn	March 4-11.	11th Annual, Brooklyn Motor Vehicle Dealers Association, 23d Regiment Armory. Ralph E. Ebbert, manager.
St. Louis	Oct. 15-22.	Automobile Exposition, St. Louis Manufacturers & Dealers Association.	Boston	March 11-18.	Annual, Chester I. Campbell, manager.
Birmingham	Oct. 24-29.	Annual Automobile Show, E. W. Brownell, chairman.	Newark, N. J.	Sept.	Newark Automobile Dealers Association, First Regiment Armory. Claude E. Holgate, manager.
Little Rock	Nov. 11-19.	Little Rock Automobile Dealers Association. A. W. Parke, manager.	Santiago, Cuba	March	Annual Automobile Show
Jersey City	Nov. 14-19.	Second Annual Automobile Show, Hudson County Automobile Trade Association, Fourth Regiment Armory.	Rio de Janeiro, Brazil.	Sept.	Automotive Exhibition in connection with Brazilian Centenary.
New York	Nov. 27-Dec. 3.	Automobile Salon, Hotel Commodore.			
Columbus, Ohio	Dec. 13-16.	Fifth Annual Convention and Automotive Equipment Exhibit of the Ohio Automotive Trade Association.			
Chicago	January	Automobile Salon, Drake Hotel.			
New York	Jan. 7-13.	National Automobile Show, under auspices of National Automobile Chamber of Commerce, Grand Central Palace.			
Buffalo	Jan. 14-21.	19th Annual Buffalo Dealers Association, 74th Armory. Carlton B. Proctor, manager.			
Cleveland	Jan. 21-28.	Cleveland Automobile Manufacturers and Dealers Association, City Exposition Building. Fred H. Caley, manager.			
Chicago	Jan. 28-Feb. 3.	National Automobile Show, under auspices of National Automobile Chamber of Commerce, Coliseum.			
Minneapolis	Jan. 30-Feb. 4.	Seventh National Tractor Show and Educational Exposition, Minneapolis State Fair Grounds, under management of N. I. V. A., 72 West Adams Street, Chicago.			

ENCLOSED CAR WEEK

Detroit	Oct. 8-15
Kansas City	Oct. 8-15
Buffalo	Oct. 15-22
Syracuse	Oct. 15-22
Cleveland	Oct. 17-23
Brooklyn	Oct. 24-29
Rochester	Oct. 24-29
Washington, D. C.	Nov. 14-19

RACES

Los Angeles	Nov. 24.	Speedway Events.
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CONVENTIONS

Chicago	Oct. 12-14.	National Implement & Vehicle Association Convention, Congress Hotel.
Chicago	Nov. 14-19.	Annual Meeting and Business Exhibit of Automotive Equipment Association.
New York City	Nov. 15-16.	Semi-Annual Convention of Factory Service Managers, N. A. C. C., H. R. Cobligh, Secretary.

INDIANA WILL COMPEL PURCHASE OF LICENSES

INDIANAPOLIS, Sept. 26—Following a ruling in court here recently in which the Indiana motor vehicle law was held constitutional, the prosecutor of Marion County is demanding that 200 defendants failing to obtain State license for trucks be adjudged guilty. He says that about 200 truck owners who did not take out State truck licenses were awaiting the outcome of the recent decision. Wm. P. Frye, the defendant in the test case, is the proprietor of the Wm. P. Frye Transfer Co., and at the time he was ruled against he was given 30 days in which to file an appeal. Several days in which to perfect an appeal have passed, but it has not been filed. The county prose-

cutor is demanding action on the 200 other defendants.

Kissel Prices Down

HARTFORD, WIS., Sept. 26—Reductions ranging from \$600 to \$1,000 on its lines of trucks are announced by the Kissel Motor Car Co. The prices follow:—

	New Price	Old Price
Utility model 1½ ton...	\$1,975	\$2,775
Freighter model 2½ ton.	2,875	3,475
Heavy duty model 4 ton.	3,675	4,475
Collath model 5 ton.....	4,085	5,085

Tulsa Drops

TULSA, OKLA., Sept. 26—The Witt-Thompson Motor Co. has reduced prices on the Tulsa roadster and five-passenger touring car, Model E 1-3, from \$1,285 to \$1,175.

LOWER PRICES BOOST OHIO REGISTRATION

COLUMBUS, Sept. 26—Stimulated by the general reduction in prices and by the Atwood law which requires the registration of bills of sale on all used cars when ownership is changed, registration with the Ohio automobile department so far this year has been far greater than the totals for 1920. Up to Sept. 15 of this year the department registered in excess of 604,000 gasoline passenger cars; 4000 electrics; 97,000 trucks and 3700 dealers and manufacturers. The total registration in the various classifications in 1920 was gasoline passenger cars 533,000, electrics 4000, trucks 83,000, dealers and manufacturers 3700.

Specifications of Current Passenger Car Models

NAME AND MODEL	Engine Make	Cylinders, Bore and Stroke	WB	Tires	2-Pass.	5-Pass.	7-Pass.	Coupe	Sedan	NAME AND MODEL	Engine Make	Cylinders, Bore and Stroke	WB	Tires	2-Pass.	5-Pass.	7-Pass.	Coupe	Sedan
Ace	G. Guy.	6-31x5	123	32x4	\$2975	\$2975	...	\$3680	\$3680	Maibohm	B. Falls.	6-31x4 1/2	116	32x4	11675	\$1575	11675	\$2395	\$2395
Ace	H.S.	6-31x5	123	32x4	2975	2975	...	3680	3680	Marmen	34 Own.	6-31x5 1/2	136	32x4 1/2	4185	13985	3985	4875	5275
Ace	L.H.S.	4-31x5	110	32x4	2260	2260	...	...	...	Maxwell	25 Own.	4-31x4 1/2	109	30x3 1/2	845	845	1445	1545	1545
Allen	Series 43	Own.	4-31x5	116	32x4	1195	1195	...	1845	McFarlan	1921	Own.	4-31x6	140	33x5	6300	6300	7500	7500
Ambassador	R. Cont.	6-31x5 1/2	136	33x5	...	4500	4500	...	6500	Merced	Series 5	Own.	4-31x6 1/2	132	32x4 1/2	3950	3950	5150	5650
American	C.H.S.	6-31x5	127	32x4	2165	2165	...	3150	3150	Merit	Cont.	6-31x5 1/2	119	32x4	2245	2245	...	...	...
Anderson	Series 40	Cont.	6-31x4 1/2	120	32x4	2195	1795	2795	2795	Motor	R & R	Dues.	4-41x6	129	32x4 1/2	5500	5500	...	...
Apperson	8-21-S	Own.	8-31x5	130	34x4 1/2	...	3000	3250	4500	Metz	M6	Rut.	6-31x5 1/2	120	32x4	1995	1995	...	...
Apperson	Anniversary	Own.	8-31x5	130	34x4 1/2	...	3500	3750	...	Mitchell	F-40	Own.	6-31x5	120	32x4	...	...	2895	...
Auburn	6-51	Cont.	6-31x4 1/2	121	32x4	167	1695	1760	2475	Mitchell	F-42	Own.	6-31x5	120	32x4	11490	1490	...	...
Beggs	267	Cont.	6-31x4 1/2	120	33x4	1775	1775	...	2675	Mitchell	F-45	Own.	6-31x5	127	33x4	...	1795	...	...
Bell	4-32	Cont.	4-31x5	114	31x4	...	1495	...	...	Moller	A. Own.	4-21x4	100	27x3 1/2	2000	...	2200	2440	
Bell	6-50	Cont.	6-31x5	124	32x4	...	1605	...	...	Monroe	S-8 & 10	Own.	4-31x4 1/2	115	32x3 1/2	1285	1285	...	...
Biddle	B1	Buda	4-31x5 1/2	121	32x4	3475	3475	...	3975	Monroe	S-11 & 12	Own.	4-31x4 1/2	115	33x4	...	2075	2175	...
Birch Super-Four	H.S.	4-31x5 1/2	117	33x4	1105	1195	1245	2295	1795	Moore	6-48	Cont.	6-31x4 1/2	122	32x4	1785	1785	2485	2785
Birch Light Four	Left.	6-31x5 1/2	108	30x3 1/2	1015	1015	...	...	...	Moore	6-48	Cont.	6-31x5 1/2	125	32x4 1/2	2485	2485	3485	3485
Birch Light Six	H.S.	6-31x5 1/2	117	33x4	1395	1395	1445	...	1995	Murray-Mac Six	Cont.	6-31x5 1/2	128	34x4 1/2	4250	4250	...	...
Bour-Davis	215	Cont.	6-31x5 1/2	126	33x4 1/2	2385	2385	...	...	Nash	681-7	Own.	6-31x5	121	33x4	1525	1545	1665	2395
Brewster	91	Own.	4-41x5 1/2	129	32x4 1/2	7000	7000	...	10500	Nash	682	Own.	6-31x5	127	34x4 1/2	...	1665	...	...
Briscoe	4-34	Own.	4-31x5	109	31x4	1085	1085	...	1685	Nash	682	Own.	4-31x5	112	32x3 1/2	1175	1195	1735	1935
Buick	1922-31-35-37	Own.	4-31x4 1/2	109	31x4	935	975	...	1475	Nash Four	41-4	Own.	4-31x5	130	32x4 1/2	2990	2990	3990	3990
Buick	1922-41-5-6-7	Own.	6-31x5 1/2	118	33x4 1/2	1495	1525	...	2135	National Seated	BB	Own.	6-31x5 1/2	104	32x4	...	1750	...	...
Buick	1922-48-5-6	Own.	6-31x5 1/2	124	34x4 1/2	...	1735	2325	2635	Nelson	D	Own.	4-31x4 1/2	128	32x4 1/2	2800	2350	3200	3700
Bush	E.C.A.	Lye.	6-31x5	116	33x4	...	1195	...	...	Noma	1C	Cont.	6-31x4 1/2	116	32x3 1/2	1085	...	...	...
Bush	E.C.A.	Rut.	6-31x5	116	33x4	...	1345	...	1750	Norwalk	436-KS	Lye.	4-31x5	...	...	...	...	...	...
Cadillac	61	Own.	8-31x5 1/2	132	33x5	3790	3790	3940	4340	Oakland	34-C	Own.	6-21x4 1/2	115	32x4	1095	1195	1265	1625
Case	V	Cont.	6-31x5 1/2	126	34x4 1/2	...	2250	2900	3285	Oregon	6-48	Own.	6-31x5 1/2	134	33x5	3550	3750	5000	5400
Chalmers	6-30	Own.	6-31x4 1/2	117	32x4	1495	1545	...	2295	Oldsmobile	43-A	Own.	4-31x5 1/2	115	32x4	1145	1145	1645	1845
Chalmers	6-30	Own.	6-31x4 1/2	122	33x4 1/2	...	1795	...	...	Oldsmobile	37-A	Own.	6-21x4 1/2	112	32x4	1450	1450	2145	2145
Champion	Tourist	Lye.	4-31x5	113	32x3 1/2	...	1095	...	...	Oldsmobile	46	Own.	8-21x4 1/2	122	33x4 1/2	1735	1735	2635	2635
Champion	Special	H.S.	4-31x5	118	32x4	1395	1395	...	2885	Oldsmobile	47	Own.	8-21x4 1/2	115	32x4	1625	1625	2125	2425
Chandler	Six	Own.	6-31x5	123	33x4	1785	1785	2785	2885	Overland	4	Own.	4-31x4 1/2	100	30x3 1/2	595	595	850	895
Chevrolet	490	Own.	4-31x4	102	30x3 1/2	525	525	...	875	Packard	Single-Six	Own.	6-31x4 1/2	116	33x4 1/2	2975	2975	3650	3975
Chevrolet	FB	Own.	4-31x5 1/2	110	32x4	975	975	1575	1575	Packard	Twin Six	Own.	12-31x5	136	35x5	4850	4850	6600	6800
Cleveland	40	Own.	6-31x5 1/2	112	32x4	1295	1295	2195	2295	Paige	6-42	Own.	6-31x5	119	32x4	1635	1635	2450	2570
Climber Four	H.S.	4-31x5	115	33x4	1585	1585	...	...	...	Paige	6-44	Own.	6-31x5	131	33x4 1/2	12975	13295	2875	3755
Climber Six	S	H.S.	6-31x5 1/2	125 1/2	32x4 1/2	2250	2250	...	...	Pan American	E&F-6-55	H.S.	6-31x5	121	33x4	2000	2000	2100	...
Cole	870	Nort.	8-31x5 1/2	127	33x5	2550	2550	2695	2795	Parson	1921	Own.	8-21x4 1/2	125	32x4	2000	2000	...	3000
Columbia Challenger	Rut.	6-31x5	115	32x4	...	1195	...	1195	1095	Peterson	650	Own.	6-31x4 1/2	120	33x4	...	1595	1625	2895
Columbia	D-C&C	Cont.	6-31x4 1/2	115	32x4	1475	1475	1475	2350	Peterson	56-57	Own.	8-31x5	125	34x4 1/2	...	2890	2880	3500
Comet	C-53	Cont.	6-31x4 1/2	125	33x4 1/2	...	2350	2450	3650	Piedmont	4-30	Lye.	4-31x5	116	32x3 1/2	970	970	...	...
Commonwealth	44	H.S.	4-31x5	117	32x4	...	1395	...	2465	Piedmont	6-40	Cont.	6-31x4 1/2	122	32x4	1255	1255	...	...
Crawford	21-6-40	Cont.	6-31x5 1/2	122 1/2	32x4	3000	3000	3000	4500	Pierce-Arrow	6-45	Own.	6-41x5 1/2	138	35x5	7000	15000	6500	8000
Crew-Ekhart	L63-65	Lye.	4-31x5	117	32x3 1/2	1295	1295	...	...	Pilot	6-45	Teetor	6-31x5	120	32x4	1045	1855	...	...
Crew-Ekhart	S63-65	H.S.	4-31x5	117	33x4	11545	1545	...	2395	Pilot	6-50	H.S.	6-31x5	126	32x4 1/2	2285	2285	2335	3350
Daniels	D-19	Own.	8-31x5 1/2	132	34x4 1/2	5350	5350	6250	6950	Porter	40	Own.	4-41x6 1/2	142	35x5	6750	Chassis Price	...	...
Davis	61-67	Cont.	6-31x4 1/2	120	32x4	11995	1895	2795	2795	Premier	6-D	Own.	6-31x5 1/2	126 1/2	33x5	3790	3690	3890	4690
Dispatch	Wisc.	4-31x5	120	34x4	1250	1350	1525	1575	1575	Premcar	6-40 A	Falls.	6-31x4 1/2	117	33x4	1295	1295	...	...
Dixie Flyer	H-S-70	H.S.	4-31x5	112	32x4	1445	1445	1945	2295	Raleigh	A-6-40	H.S.	6-31x5	122	32x4 1/2	2250	2250	...	3100
Dodge Brothers	Own.	4-31x5 1/2	114	32x4	935	985	1585	1785	1785	R & V Knight	R. Own.	4-31x5	116	32x4	2150	2150	2850	2850	
Dorris	6-80	Own.	6-41x5	132	33x5	...	4785	5800	6090	R & V Knight	J. Own.	6-31x5 1/2	127	32x4 1/2	3350	3350	3350	4000	
Dort	17-12	D-Ly.	31x4	985	985	...	1535	1685	1685	Ree Series A	T-6	Own.	6-31x5	120	33x4	1650	1650	2700	2760
Driggs	Own.	4-21x4 1/2	104	30x3 1/2	1275	1275	...	1975	...	Revere	C. Dues.	4-41x6	131	32x4 1/2	4650	4650	4650	5500	
Du Pont	A	Own.	4-31x5 1/2	124	32x4 1/2	3400	3400	4900	4900	Roamer	6-54-E	Cont.	6-31x5 1/2	128	32x4 1/2	2750	2650	2750	3850
Durant	A-22	Cont.	4-31x4 1/2	109	31x4	...	890	1365	1365	Roamer	4-75-E	Dues.	4-41x6	128	32x4 1/2	3850	3850	...	...
Eclair	E-4	Lye.	4-31x5	117	33x4	1195	1195	...	2495	Rolls-Royce	Cont.	6-31x4 1/2	123 1/2	33x5	U. S.	Chassis Price	11750	...	...
Eclair	7-R	Cont.	6-31x4 1/2	117	33x4	11595	1595	11595	2395	Saxon	125	Own.	4-31x5	112	32x4	1545	1495	...	2295
Elgin	E-1	Falls.	4-31x5	118	33x4	1595	1595	1595	2395	Sayers Six	DP	Cont.	6-31x4 1/2	118	33x4	1945	1945	...	2995
Essex	Own.	4-31x5	108 1/2	32x4	1375	1375	...	1890	2230	Scripps-Bentley	B-30-42	Nort.	6-21x4 1/2	116	32x4	11275	1295	...	1950
Fergus	S-5-21	Own.	6-31x5	126	33x4 1/2	...	Chassis Price	8500	...	Scripps-Bentley	F-43-46	Cont.	6-31x4 1/2	115	32x4	1470	1490	...	2375
Ferris	C-20	Cont.	6-31x5 1/2	130	32x4 1/2	2695	2695	...	3695	Sonoma	L & O	Lett.	4-31x4 1/2	108	30x3 1/2	1045	1045	...	...
Ford	T	Own.	4-31x4	100	30x3 1/2	3325	3355	505	680	Soverin	Six	Cont.	6-31x5 1/2	122 1/2	33x4 1/2	1485	1485	...	2100
Franklin	9-B	Own.	4-31x4	115	32x4	2300	2350	72300	3360	Soverin	Six	Cont.	6-31x5 1/2	122 1/2	33x5	2550	2550	3250	3350
Gardner	G	Lye.	4-31x5	112	32x3 1/2	1995	995	...	1795	Skatlon	35	Lye.	4-31x5	112	32x4 1/2	995	995	...	...
Grant	Six	Own.	6-31x4 1/2	116	32x4	1550	1550	...	2450	Southern Six	600-2	H.S.	6-31x5	127	32x4 1/2	2375	2375	2395	...
H.C.S.	Weid.	4-31x5 1/2	120	32x4 1/2	2725	2775	...	3450	3650	Standard	J. Own.	8-31x5	127	34x4 1/2	3400	3400	3400	4500	
Halladay, Manx, Special	Rut.	6-31x5	118	33x4	...	1695	...	...	...	Stanley Steamer	Own.	2-41x5	130	34x4 1/2	2800	2800	2600	3775	
Halladay, Craft Special	Rut.	4-31x5	123	33x4	...	2435	...	...	...	Stanwood Six	Cont.	6-31x4 1/2	118	33x4	2050	2050	2950	2950	
Haley-Knight	Kn ht.	4-31x4 1/2	125	32x4 1/2	...	2850	...	4185	...	Stearns	SKL4	Own							

Specifications of Current Motor Truck Models

NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive
				Front	Rear						Front	Rear						Front	Rear	
Acason	3/4	\$1650§	3 1/2 x 5	34x5 1/2	34x5 1/2	W	Corbitt, A	3 1/2	\$4100	4 1/2 x 5 1/2	36x5	36x10	W	Gary, J	2 1/2	\$3150	4 1/2 x 5 1/2	36x4	36x7	W
Acason, R	1	2280	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Corbitt, AA	5	5000	4 1/2 x 6	36x6	40x6d	W	Gary, K	3 1/2	4050	4 1/2 x 6	36x5	40x5d	W
Acason, RB	1 1/2	2485	3 1/2 x 5 1/2	36x3 1/2	36x6	W	Cyclone, A	1 1/2	2685§	3 1/2 x 5	34x5 1/2	36x6 1/2	I	Gary, M	5	5150	5 x 6 1/2	36x6	40x6d	W
Acason, H	2 1/2	3295	4 1/2 x 5 1/2	36x4	36x8*	W	Dart, S	1 1/2	....	3 1/2 x 5 1/2	34x3 1/2	34x6	W	Gersix, M	1 1/2	3100	4 x 5 1/2	36x3 1/2	36x7	W
Acason, L	3 1/2	4295	4 1/2 x 5 1/2	36x5*	36x10*	W	Dart, M	2 1/2	....	4 1/2 x 5 1/2	36x3 1/2	36x7	W	Gersix, K	2 1/2	3500	4 1/2 x 5 1/2	36x4	36x8	W
Acason, M	5	5250	5 x 6 1/2	36x6	40x12	W	Dart, W	3 1/2	2100	4 1/2 x 6	36x5	36x10	W	Gersix, L	2 1/2	4500	4 1/2 x 6	36x5	40x12	W
Ace, C	1 1/2	2295	3 1/2 x 5 1/2	34x3 1/2	34x5*	W	Day-Elder, A	1	2100	3 1/2 x 5	34x3 1/2	34x4	W	Giant, 15-A	1 1/2	2250	3 1/2 x 5	34x3 1/2	34x5	W
Ace, A	2 1/2	2795	4 1/2 x 5 1/2	36x4	36x7	W	Day-Elder, B	1 1/2	2300	3 1/2 x 5	34x3 1/2	34x5	W	Giant, 16	2	3050	4 1/2 x 5 1/2	36x4	36x7	W
Acme, G	3/4	....	3 1/2 x 5	35x5 1/2	35x5 1/2	W	Day-Elder, D	2	2750	4 1/2 x 5 1/2	36x4	36x7	W	Giant, 17	3 1/2	4150	4 1/2 x 5 1/2	36x5	36x5d	W
Acme, B	1 1/2	....	3 1/2 x 5	34x3 1/2	34x5	W	Day-Elder, F	3 1/2	3025	4 1/2 x 5 1/2	36x4	36x7	W	Golden West, GH	3 1/2	5000	4 1/2 x 6	36x7	36x7	W
Acme, F	1 1/2	....	3 1/2 x 5	34x3 1/2	34x5	W	Day-Elder, E	5	3750	4 1/2 x 5 1/2	36x5*	36x5d	W	Golden West, H	3 1/2	4500	4 1/2 x 6	36x6	36x6	W
Acme, A	2	....	4 1/2 x 5 1/2	36x4	36x7	W	Day-Elder, F	3 1/2	4250	4 1/2 x 6	36x5*	40x6d*	W	Golden West, I	4	5500	4 1/2 x 6	36x6	36x6	W
Acme, AC	2 1/2	....	4 1/2 x 5 1/2	36x4	36x7*	W	Dearborn, E	1	1700	3 1/2 x 5	35x5 1/2	35x5 1/2	W	Golden West, K	7	6000	5 1/2 x 6	36x6	36x6	W
Acme, C	3 1/2	....	4 1/2 x 5 1/2	36x5	40x10	W	Dearborn, FX	1 1/2	2300	3 1/2 x 5 1/2	34x4	34x5	W	Golden West, L	7	6000	5 1/2 x 6	36x6	36x6	W
Acme, E	5	....	4 1/2 x 6	36x6	40x12	W	Dearborn, F	1 1/2	2180	3 1/2 x 5	34x4	34x5	W	Graham Bros. A	1 1/2	2495	3 1/2 x 5	35x5 1/2	36x6 1/2	I
Akr/Multi-Trk20	1 1/2	1995	4 x 5 1/2	34x5	34x5	B	Dearborn, 48	2	2590	3 1/2 x 5 1/2	35x5 1/2	34x7 1/2	W	Graham Bros. B	10	1495	4 1/2 x 5 1/2	36x4	36x7	B
American, 25	2 1/2	3350	4 x 6	36x4*	36x4d*	W	Defiance, G	1	1695§	3 1/2 x 5	35x5 1/2	35x5 1/2	I	Graham Bros. C	15	2050	4 1/2 x 5 1/2	36x4	36x7	C
American, 40	4	4275	4 1/2 x 6	36x5*	36x5d*	W	Defiance, H	1 1/2	2095§	3 1/2 x 5	35x5 1/2	36x6 1/2	I	Graham Bros. D	20	2725	4 1/2 x 5 1/2	36x4	36x7	D
Apex, G	1	1450†	3 1/2 x 5	33x5 1/2	33x5 1/2	I	Defiance, E	2	2275§	3 1/2 x 5	35x5 1/2	38x7 1/2	I	Graham Bros. E	25	3175	4 1/2 x 5 1/2	36x4	36x7	E
Apex, D	1 1/2	1915	3 1/2 x 5 1/2	34x3 1/2	34x4	I	DeKalb, E2 1/2	2	2600	4 1/2 x 5 1/2	36x4	36x6*	W	Graham Bros. F	35	3575	4 1/2 x 5 1/2	36x5	40x5d*	W
Apex, E	2 1/2	2695	4 1/2 x 5 1/2	36x4	36x7	I	DeKalb, E2	2 1/2	2250	4 1/2 x 5 1/2	36x4 1/2	36x5*	W	Graham Bros. G	50	4575	4 1/2 x 5 1/2	36x5	40x5d*	W
Apex, F	3 1/2	3975	4 1/2 x 6	36x5	36x10	I	DeMartini, 1 1/2	1 1/2	2600	3 1/2 x 5	34x3 1/2	36x7	W	Graham Bros. H	50	5275§	4 1/2 x 6	36x6	40x6d*	W
Armleder, 20	1	....	3 1/2 x 5 1/2	34x3 1/2	34x5*	W	DeMartini, 2	2	3300	4 x 5 1/2	36x3 1/2	36x7	W	Hahn, J4	1	....	3 1/2 x 5	34x5*	34x5*	W
Armleder, HW	2 1/2	....	4 1/2 x 5 1/2	36x4	36x7*	W	DeMartini, 3	3	4250	4 1/2 x 5 1/2	36x4	36x10	W	Hahn, CD	1 1/2	....	4 1/2 x 5 1/2	36x3 1/2	36x6*	W
Armleder, KW	3 1/2	....	4 1/2 x 6	36x5	36x5d	W	DeMartini 4	4	4800	4 1/2 x 5 1/2	36x5	36x12	W	Hahn, EE	2 1/2	....	4 1/2 x 5 1/2	36x4	36x8*	W
Atco, B	1 1/2	....	3 1/2 x 5 1/2	34x5 1/2	36x6 1/2	I	Denby, 31	3 1/2	1625	3 1/2 x 5	35x5	35x5	B	Hahn, F	3 1/2	....	4 1/2 x 5 1/2	36x5*	36x10*	W
Atco, A	2 1/2	....	4 1/2 x 5 1/2	36x4 1/2	36x8*	W	Denby, 33	1 1/2	2300	3 1/2 x 5	35x5 1/2	38x7 1/2	I	Hahn, EF	5	....	4 1/2 x 6	36x6	40x12	W
Atlas, M.D.	1	1550	3 1/2 x 5	32x4 1/2	32x4 1/2	I	Denby, 34	2	2600	3 1/2 x 5	36x5	36x6	I	Hal. Fur, E	1	2250	4 x 5	35x5 1/2	35x7 1/2	W
Atterbury, 20R	1 1/2	2775	3 1/2 x 5	34x3 1/2	34x5	I	Denby, 25	3	3300	4 1/2 x 5 1/2	36x4	36x7	I	Hal. Fur, B	2 1/2	3250	4 1/2 x 5 1/2	35x5*	38x7*	W
Atterbury, 7CX	2 1/2	3375	4 1/2 x 5 1/2	36x4	36x4d	W	Denby, 27	4	4200	4 1/2 x 5 1/2	36x5	36x5d	W	Hal. Fur, F	3 1/2	4250	4 1/2 x 5 1/2	36x6 1/2	40x10†	W
Atterbury, 7D	3 1/2	4175	4 1/2 x 5 1/2	36x5	40x5d	W	Dependable, A	3 1/2	1650	3 1/2 x 5	34x5	36x6	W	Hall	1 1/2	3100	3 1/2 x 5	34x5 1/2	35x7 1/2	W
Atterbury, 8E	5	5575	4 1/2 x 6	36x5	40x6d	W	Dependable, C	1 1/2	2350	3 1/2 x 5 1/2	34x3 1/2	34x5	W	Hall	2 1/2	3275	4 1/2 x 5 1/2	36x4	36x6	W
Autocar, 21UF	1 1/2	2300	4 1/2 x 5 1/2	34x4*	34x5*	D	Dependable, D	2	2650	4 x 5 1/2	34x5	36x6	W	Hall	3 1/2	4100	4 1/2 x 5 1/2	36x5	36x5d	W
Autocar, 21UG	1 1/2	2400	4 1/2 x 5 1/2	34x4*	34x5*	D	Dependable, E	2 1/2	2950	4 1/2 x 5 1/2	36x4	36x7	W	Hall	5	5100	4 1/2 x 5 1/2	36x5	40x6d	W
Autocar, 26Y	....	4350	4 1/2 x 5 1/2	34x6	36x12	D	Dependable, G	3 1/2	3550	4 1/2 x 5 1/2	36x6	36x7	W	Hall	7	5100	4 1/2 x 5 1/2	36x5	40x6d	C
Autocar, 26-B	....	4500	4 1/2 x 5 1/2	34x6	36x12	D	Dependable, I	3 1/2	3550	4 1/2 x 5 1/2	36x6	36x7	W	Harvey, WEA	1 1/2	2550	4 1/2 x 5 1/2	34x3 1/2	34x5	W
Available, H1 1/2	1 1/2	2175	4 x 5 1/2	36x3 1/2	36x5*	W	Diamond T, O	1	2500	4 1/2 x 5 1/2	34x5 1/2	36x6 1/2	W	Harvey	2	2950	4 1/2 x 5 1/2	34x4	34x7	W
Available, H2	2	2775	4 x 5 1/2	36x3 1/2	36x6*	W	Diamond T, FS	1 1/2	2960	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Harvey, WFA	2 1/2	3300	4 1/2 x 5 1/2	34x4	36x7	W
Available, H2 1/2	2 1/2	3475	4 x 5 1/2	36x4	36x8*	W	Diamond T, T	1 1/2	2950	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Harvey, WHA	3 1/2	3950	4 1/2 x 6	36x5	36x5d	W
Available, H3 1/2	3 1/2	4175	4 1/2 x 5 1/2	36x5	40x5d	W	Diamond T, U	2	3285	4 x 5 1/2	36x4	36x7	W	Harvey, WKA	5	4500	4 1/2 x 6	36x6	40x6d	W
Available, H5	5	5375	4 1/2 x 6	36x6	40x12	W	Diamond T, K	3 1/2	4675	4 1/2 x 5 1/2	36x5	36x5d	W	Hawkeye, K	1 1/2	1850	3 1/2 x 5 1/2	34x3 1/2	34x5*	I
Available, H7	7	6000	5 x 6	36x6	40x14	B	Diamond T, EL	5	5400	4 1/2 x 5 1/2	36x6	40x6d	W	Hawkeye, M	2	2650	4 1/2 x 5 1/2	36x4	36x6*	I
Avery	1	....	3 x 4	34x5 1/2	34x5 1/2	I	Diamond T, S	5	5650	4 1/2 x 6	36x6	40x6d	W	Hawkeye, N	3 1/2	3700	4 1/2 x 6	36x5*	36x10*	W
Beck, A Jr.	1	1950	3 1/2 x 5	34x3 1/2	34x4	I	Diehl, A	1	....	3 1/2 x 5	34x4 1/2	35x5	I	Hendrickson, N	2 1/2	3150	4 1/2 x 5 1/2	36x4	36x7*	W
Beck, C	2	2550	4 1/2 x 5 1/2	36x4	36x6	I	Diehl, B	1 1/2	....	3 1/2 x 5	36x6	36x6	I	Hendrickson, M	3 1/2	3975	4 1/2 x 5 1/2	36x5*	36x5d	W
Bell, M	1	1495	3 1/2 x 5 1/2	35x5	35x5 1/2	W	Dispatch, F	1	1350	3 1/2 x 5	34x4 1/2	34x4 1/2	I	Highway, Knight A	4	....	4 x 6	36x5	36x6d	W
Bell, E	1 1/2	2100	3 1/2 x 5 1/2	34x3 1/2	34x5 1/2	W	Doane	2 1/2	4100†	4 1/2 x 5 1										

Specifications of Current Motor Truck Models—Continued

NAME AND MODEL	Tons Capacity	Chassis Price	Base and Stroke	TIRES	Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Base and Stroke	TIRES	Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Base and Stroke	TIRES	Final Drive			
				Front	Rear					Front	Rear					Front	Rear			
Kelly-S, K-45	4	\$4550	4 1/2 x 8 1/2	36x5	40x6d	C	Ogden, E	2 1/2	\$3250	4 1/2 x 5 1/2	30x4	36x7	W	Signal, NF	1	\$2475	4 1/2 x 5	34x5 1/2	36x8 1/2	W
Kelly-S, K-50	5	4900	4 1/2 x 8 1/2	36x6	40x6d	C	Old Hickory, W	1	2175	3 1/2 x 5 1/2	36x3 1/2	36x4	W	Signal, H	1 1/2	2925	4 1/2 x 5 1/2	34x4	36x8	W
Kelly-S, K-50	6	5100	4 1/2 x 8 1/2	36x6	40x7d	C	Old Reliable, A	1 1/2	2350	4 x 5	34x4	36x6	W	Signal, J	2 1/2	3275	4 1/2 x 5 1/2	34x4	36x8	W
Keystone, 40	2	2450	3 1/2 x 5 1/2	36x5 1/2	38x7 1/2	I	Old Reliable, B	2 1/2	3500	4 1/2 x 6	34x4	36x4d	W	Signal, M	3 1/2	4275	4 1/2 x 5 1/2	36x5	40x5d	W
Kimball, AB	2	3675	4 x 8	36x4	36x7	W	Old Reliable, C	3 1/2	4250	4 1/2 x 6	36x5	36x5d	W	Signal, R	5	5300	4 1/2 x 6	36x6	40x5d	W
Kimball, AC	2 1/2	3975	4 1/2 x 8	36x4	36x8	W	Old Reliable, D	5	5250	4 1/2 x 6	36x6	40x6d	W	Southern, 10	1	2090	3 1/2 x 5	34x3 1/2	34x4	W
Kimball, AK	3	4500	4 1/2 x 8	36x4	36x10	W	Old Reliable, KLM	7	6000	4 1/2 x 6 1/2	36x6	40x7d	C	Southern, 15	1 1/2	2590	3 1/2 x 5 1/2	36x6 1/2	34x4	W
Kimball, AE	4	5000	4 1/2 x 8	36x5	40x12	W	Oldsmobile Econ.	1	1095	3 1/2 x 5 1/2	35x5 1/2	35x5 1/2	I	Southern, 20	2	2990	4 1/2 x 5 1/2	36x7 1/2	40x8	W
Kimball, AF	5	5975	5 x 8	36x6	40x7d	W	Olympic, A	2 1/2	3600	4 1/2 x 5 1/2	36x4	36x7	W	Standard, 1-K	1-1 1/2	1800	3 1/2 x 5	34x3 1/2	34x5	W
Kinsel, Express	1	1985 1/2	3 1/2 x 5 1/2	34x5 1/2	34x5 1/2	W	Oneida, A-9	1 1/2	2350	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Standard, 76	2 1/2-3	2000	4 1/2 x 5 1/2	36x4	36x7	W
Kinsel, Utility	1 1/2	2775	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Oneida, B-9	1 1/2	2915	4 x 5 1/2	36x4	36x7	W	Standard, 69	3 1/2-4	2800	4 1/2 x 5 1/2	36x5	36x10	W
Kinsel, Freight	2 1/2	3475	4 1/2 x 5 1/2	36x4	36x7	W	Oneida, C-9	2 1/2	3390	4 x 5 1/2	36x4	36x7	W	Standard, 5-K	5-7	4400	4 1/2 x 6	36x6	40x12	W
Kinsel, H. D.	4	4475	4 1/2 x 5 1/2	36x5	36x5d	W	Oneida, D-9	3 1/2	4345	4 1/2 x 5 1/2	36x5	36x10	W	Sterling, 1 1/2	1 1/2	3200	4 x 5 1/2	36x3 1/2	36x5	W
Kleber, AA	1	2600	4 1/2 x 5 1/2	31x3 1/2	34x5	W	Oneida, E-9	5	5780	4 1/2 x 5 1/2	36x6	40x12	W	Sterling, 2	2	3500	4 x 5 1/2	36x4	36x6	W
Kleber, AB	1 1/2	3100	4 1/2 x 5 1/2	36x3 1/2	36x6	W	Oshkosh, A	2	3400	3 1/2 x 5	36x6 1/2	36x7	W	Sterling, 2 1/2	2 1/2	3650	4 1/2 x 5 1/2	36x4	36x4d	W
Kleber, BB	2	3600	4 1/2 x 5 1/2	36x4	36x7	W	Oshkosh, AA	2	3850	3 1/2 x 5	36x6 1/2	36x7	W	Sterling, 3 1/2	3 1/2	4650	4 1/2 x 5 1/2	36x5	40x5d	W
Kleber, BB	2 1/2	3950	4 1/2 x 5 1/2	36x5	36x8	W	Oshkosh, B	2 1/2	4150	4 x 5 1/2	38x7 1/2	38x7 1/2	W	Sterling, 5-W	5	5500	5 x 6 1/2	36x6	40x6d	W
Kleber, C	3 1/2	4600	4 1/2 x 5 1/2	36x5	36x5d	W	Oshkosh, BB	2 1/2	4300	4 x 5 1/2	38x7 1/2	38x7 1/2	W	Sterling, 5-C	5	6000	5 x 6 1/2	36x6	40x6d	W
Kleber, D	5	5300	5 x 6 1/2	36x6	40x12	W	Packard, EC	...	3500	4 1/2 x 5 1/2	36x4	36x7	W	Sterling, 7 1/2	7 1/2	6500	5 x 6 1/2	36x6	40x7d	W
Koehler, D	1 1/2	1885	3 1/2 x 5	34x3 1/2	34x5	W	Packard, ED	...	4100	4 1/2 x 5 1/2	36x5	36x5d	W	Stewart, 14	1 1/2	1395	3 1/2 x 5 1/2	32x4 1/2	32x4 1/2	I
Koehler, M	2 1/2	2875	4 x 5 1/2	36x4	36x7	W	Packard, EF	...	4800	5 x 5 1/2	36x6 1/2	40x6d	W	Stewart, 15	1	1875	3 1/2 x 5	35x5 1/2	35x5 1/2	I
Koehler, MCS	2 1/2	2975	4 x 5 1/2	36x4	36x7	W	Packard, EX	...	4000	4 1/2 x 5 1/2	36x6 1/2	40x6d	W	Stewart, 9	1 1/2	2200	3 1/2 x 5	34x3 1/2	34x5	I
Koehler, F	3 1/2	3985	4 1/2 x 5 1/2	36x5	36x10	W	Paige, 52-19	1 1/2	2980	4 x 5 1/2	34x3 1/2	34x5	W	Stewart, 7	2 1/2	2800	4 1/2 x 5 1/2	34x4	34x7	I
Koehler, MT, Trac	5	2975	4 x 5 1/2	36x4	36x7	W	Paige, 54-20	2 1/2	3400	4 1/2 x 5 1/2	34x4	34x8	W	Stewart, 7-X	2 1/2	2950	4 1/2 x 5 1/2	34x4	34x7	I
L.M.C., 2-20	2 1/2	2540	4 1/2 x 5 1/2	36x4	36x4d	I	Paige, 51-18	3 1/2	4285	4 1/2 x 5 1/2	36x5	36x5d	W	Stewart, 10	3 1/2	3850	4 1/2 x 5 1/2	36x5	36x5d	I
Lange, B	2 1/2	3350	4 1/2 x 5 1/2	36x4	36x6	I	Paige, 50-15	2	3500	4 x 6	34x4	36x4d	W	Stewart, 10-X	3 1/2	3850	4 1/2 x 5 1/2	36x5	36x5d	I
Larrabee, XZ	2 1/2	1925	3 1/2 x 4 1/2	34x3 1/2	34x5 1/2	B	Parker, F20	3	4400	4 1/2 x 6	36x5	40x5d	W	Stoughton, A	1 1/2	1995	3 1/2 x 5 1/2	34x4 1/2	35x5 1/2	W
Larrabee, U	1 1/2	2400	3 1/2 x 4 1/2	34x3 1/2	34x5	B	Parker, M20	3 1/2	5500	4 1/2 x 6	36x6	40x6d	W	Stoughton, B	1 1/2	2350	3 1/2 x 5 1/2	36x3 1/2	36x5	W
Larrabee, SK	2 1/2	3200	4 1/2 x 5 1/2	36x4	36x7	W	Patriot, Revere	1 1/2	1785	3 1/2 x 5	35x5 1/2	35x5 1/2	W	Stoughton, C	2 1/2	2800	4 x 5 1/2	36x4	36x7	W
Larrabee, FL	3 1/2	4000	4 1/2 x 5 1/2	36x5	36x5d	W	Patriot, Lincoln	1 1/2	2450	4 x 5 1/2	34x3 1/2	34x5	W	Stoughton, D	2	3600	4 1/2 x 5 1/2	36x5d	36x5d	W
Larrabee, FW	5	4800	4 1/2 x 6	36x6	40x6d	W	Patriot, Washg'tn	2 1/2	3480	4 1/2 x 5 1/2	36x4	36x7	W	Sullivan, E	2	3350	4 1/2 x 5 1/2	36x4	36x7	W
Lion, L	1	2350	3 1/2 x 5	35x5 1/2	35x5 1/2	W	Piedmont, 4-30	1 1/2	1885	3 1/2 x 5	34x4 1/2	34x4 1/2	W	Sullivan, H	3 1/2	4650	4 1/2 x 5 1/2	36x5	36x5d	W
Loedinghaus, C	1	2100	3 1/2 x 5	35x5 1/2	35x5 1/2	W	Pierce-Arrow	2	3200	4 x 5 1/2	36x4	36x4d	W	Superior, D	2	1650	3 1/2 x 5	34x4 1/2	34x4	I
Loedinghaus, W	1 1/2	2700	3 1/2 x 5 1/2	34x3 1/2	34x5	W	Pierce-Arrow	3 1/2	4350	4 1/2 x 5 1/2	36x5	36x5d	W	Superior, E	2	2600	4 1/2 x 5 1/2	36x4	36x6	W
Loedinghaus	2-2 1/2	3150	4 1/2 x 5 1/2	36x4	36x7	W	Pierce-Arrow	5	4850	4 1/2 x 5 1/2	36x5	40x6d	W	Super Truck, 50	2 1/2	3300	4 x 6	36x4	36x8	W
Maccar, L	1 1/2	2925	4 1/2 x 5 1/2	36x4	36x6	W	Pittsburgher, C-21	2 1/2-3	3500	4 1/2 x 5 1/2	36x5	36x7	W	Super Truck, 70	3 1/2	4300	4 x 6	36x5	40x5d	W
Maccar, H-2	2 1/2	3650	4 1/2 x 5 1/2	36x4	36x4d	W	Pony	1	400	2 1/2 x 4	28x3 1/2	28x3 1/2	C	Super Truck, 100	5	5300	4 x 6	36x5	40x12	W
Maccar, M-2	3 1/2	4500	4 1/2 x 6	36x5	36x5d	W	Power, F	1 1/2	...	3 1/2 x 5 1/2	36x6	36x6	W	Super Truck, 150	7 1/2	6300	5 x 6	36x5	40x7d	W
Maccar, G	5	5500	4 1/2 x 6	36x6	40x6d	W	Power, C	3 1/2	...	4 1/2 x 5 1/2	36x6	40x10	W	Texas, A38	3 1/2	1095	3 1/2 x 5	33x4	33x4	I
MacDonald, A	7 1/2	6750	4 1/2 x 6	40x7	40x14	I	Premcar, B-143	1 1/2	2475	3 1/2 x 5	36x6 1/2	36x6 1/2	W	Texas, TK39	1 1/2	1550	3 1/2 x 5	36x6	36x7	W
Mack, AB D.R.	1 1/2	3450	4 x 5	36x4	36x3 1/2	D	Rainier, R-11	1 1/2	2150	3 1/2 x 5	35x5 1/2	35x5 1/2	W	Tiffin, CW	1 1/2	2400	4 1/2 x 5 1/2	36x3 1/2	36x5	W
Mack, AB	2 1/2	3400	4 x 5	36x4	36x4d	C	Rainier, R-19	1	2350	3 1/2 x 5	34x3 1/2	34x4	W	Tiffin, MW	2 1/2	3100	4 1/2 x 5 1/2	36x4	36x3 1/2	W
Mack, AB Chain	2 1/2	3000	4 x 5	36x4	36x3 1/2	C	Rainier, R-15	1 1/2	2800	3 1/2 x 5	34x3 1/2	34x5	W	Tiffin, PW	3 1/2	4100	4 1/2 x 5 1/2	36x5	36x5d	W
Mack, AB Chain	2	3300	4 x 5	36x4	36x4d	C	Rainier, R-16	1 1/2	2900	3 1/2 x 5	34x4	34x6	W	Tiffin, F50	6	4800	4 1/2 x 6	36x6	40x6d	W
Mack, AB D.R.	2	3750	4 x 5	36x4	36x4d	C	Rainier, R-18	2	2950	4 1/2 x 5 1/2	34x4	34x6	W	Tiffin, F60	6	5000	4 1/2 x 6	36x6	40x12	W
Mack, AC Chain	3 1/2	4850	5 x 6	36x5	40x5d	C	Rainier, R-20	2 1/2	3800	4 1/2 x 5 1/2	34x4	34x7	W	Titan, HT	8	4850	4 1/2 x 6	36x6	40x5d	I
Mack, AC Chain	4 1/2	5500	5 x 6	36x6	40x6d	C	Rainier, R-15	3 1/2	4500	4 1/2 x 5 1/2	36x5	36x5d	W	Titan, HD	8	5400	4 1/2 x 6	36x6	40x6d	I
Mack, AC Chain	6 1/2	6750	5 x 6	36x6	40x12	C	Rainier, R-17	5	5250	4 1/2 x 6	36x6	36x6d	W	Titan, TS	2 1/2	3400	4 1/2 x 5 1/2	34x4	36x4d	I
Mack, AC Chain	7 1/2	7500	5 x 6	36x7	40x7d	C	Ranger, TK-28-2	2	...	3 1/2 x 5	36x6 1/2	36x6 1/2	W	Tower, J	1 1/2	3000	4 1/2 x 5 1/2	35x5	36x7	W
Mack Trac, AB	5	3400	4 x 5	36x4	36x4d	C	Reliance, 10A	1 1/2-1 1/2	1385	4 1/2 x 4 1/2	31x4 1/2	31x4 1/2	B	Tower, H	2 1/2	3475	4 1/2 x 5 1/2	36x4	36x7	W
Mack Trac, AC	7	4850	4 x 5	36x5	40x5d	C	Reliance, 20B	1 1/2	2400	4 x 5 1/2	36x3 1/2	36x5	I	Tower, G	3 1/2	4400	4 1/2 x 5 1/2	36x5	36x5d	W
Mack Trac, AC	10	5500	5 x 6	36x6	40x6d	C	Reliance, 75	2 1/2	3100	4 1/2 x 5 1/2	36x4	36x4d	I	Traffic, C	5	1565	3 1/2 x 5	34x3 1/2	34x5	W
Mack Trac, AC	13	5750	5 x 6	36x6	40x12	C	Republic, 75	1 1/2	1985 1/2	3 1/2 x 5	32x4 1/2	32x4 1/2	I	Traffic, 20	1 1/2	1895	3 1/2 x 5	36x4	36x7	I
Mack Trac, AC	15	6000	5 x 6	36x7	40x7d	C	Republic, 100	1	1685	3 1/2 x 5	35x5 1/2	35x5 1/2	I	Transport, 20	1 1/2	1395	3 1/2 x 5	34x3 1/2	34x4	I
Majestic, AA**	2	4150	4 x 5 1/2	36x4	36x7	W	Republic, 11X	1	2085	3 1/2 x 5	35x5 1/2	35x5 1/2	I	Transport, 30	1 1/2	1995	3 1/2 x 5 1/2	36x3 1/2	36x5	I
Majestic, BB**	3	4775	4 1/2 x 5 1/2	36x4	36x4d	W	Republic, 19	1 1/2	2795	4 1/2 x 5 1/2	36x4	36x7	I	Transport, 50	2 1/2	2785	4 1/2 x 5 1/2	36x4	36x7	I
Majestic, CC**	4	5770	4 1/2 x 5 1/2	36x5	36x5d	W	Republic, 20	2 1/2	3845	4 1/2 x 5 1/2	36x5	36x5d	W	Transport, 70	3 1/2	3885	4 1/2 x 5 1/2	36x5	36x10	I
Majestic, DD**	5	6825	4 1/2 x 5 1/2																	

Specifications of Current Motor Truck Models—Continued

NAME AND MODEL	Tons Capacity	Chassis Price	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	TIRES		Final Drive		
			Front	Rear					Front	Rear					Front	Rear			
Watson, E	1	\$1865	34x5 1/2	35x5 1/2	W	Wichita, S	5	\$5000	4 1/2 x 6	36x6	40x6d	W	Winther, 39	1 1/2	\$2450	3 1/2 x 5	34x3 1/2	34x5	I
Watson, N	3 1/2	4250	4 1/2 x 5 1/2	36x5	W	Wichita, AA	1	2100	3 1/2 x 5 1/2	36x4	36x4	W	Winther, 49	2	3250	4 x 5	34x4	34x4d	I
Western, W1 1/2	1 1/2	2550	4 1/2 x 5 1/2	36x3 1/2	W	Wisco, B	1 1/2	2775	4 1/2 x 5	36x4	36x5	W	Winther, 50	2 1/2	3995	4 x 6	36x7 1/2	42x9 1/2	I
Western, L1 1/2	1 1/2	2550	3 1/2 x 5 1/2	36x3 1/2	W	Wisco, D	2 1/2	3300	4 1/2 x 5	36x4	36x3 1/2d	W	Winther, 70	3 1/2	4200	4 x 6	36x6	36x5d	I
Western, W2 1/2	2 1/2	3250	4 1/2 x 5 1/2	36x4	W	Wisco, E	3 1/2	4250	4 1/2 x 6	36x5	36x5d	W	Winther, 150	2 1/2	3690	4 x 5	34x5	36x6	I
Western, L2 1/2	2 1/2	3250	4 1/2 x 6	36x4	W	Wisco, F	5	5200	4 1/2 x 6 1/2	36x5	40x6d	W	Winther, 100	5	5250	4 1/2 x 6	36x6	40x6d	I
Western, W3 1/2	3 1/2	4250	4 1/2 x 6	36x5	W	Wilson, F	1 1/2	2270	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Winther, 140	7	5900	5 x 6	36x6	40x7d	I
White, 15	1 1/2	2400	3 1/2 x 5 1/2	34x5 1/2	B	Wilson, EA	2 1/2	2325	4 1/2 x 5 1/2	36x4	36x7	W	Wisconsin, B	1	1950	4 x 5 1/2	34x5 1/2	34x5 1/2	W
White, 20	2	3250	3 1/2 x 5 1/2	36x4	D	Wilson, G	3 1/2	3995	4 1/2 x 5 1/2	36x5	36x5d	W	Wisconsin, C	1 1/2	2500	4 1/2 x 5 1/2	36x6 1/2	36x6 1/2	W
White, 40	3 1/2	4200	4 1/2 x 5 1/2	36x5	D	Wilson, H	5	4520	4 1/2 x 6	36x6	40x6d	W	Wisconsin, D	2 1/2	3500	4 1/2 x 6 1/2	36x6	36x10	W
White, 45	5	4500	4 1/2 x 5 1/2	36x6	D	Winther, 751	1	1795	3 1/2 x 5	34x1 1/2	35x5 1/2	I	Wisconsin, E	3 1/2	4000	5 x 6 1/2	36x6 1/2	36x12 1/2	W
White Hick., E	1	2450	3 1/2 x 5	34x5 1/2	W	Winther, 439	1 1/2	2850	3 1/2 x 5	32x4	32x4	I	Witt-Wil, N	1 1/2	2750	3 1/2 x 5	36x3 1/2	36x5	W
White Hick., H	1 1/2	2750	3 1/2 x 5	36x3 1/2	W							Witt-Wil, P	2 1/2	3250	4 1/2 x 5 1/2	36x3 1/2	36x7	W	
White Hick., K	2 1/2	3350	4 1/2 x 5 1/2	36x4	W							Wolverine, J	1	2125	3 1/2 x 5	34x3	34x4	I	
Wichita, K	1 1/2	2300	3 1/2 x 5 1/2	36x3 1/2	W							Wolverine, J	1 1/2	2375	3 1/2 x 5	34x3 1/2	34x5	I	
Wichita, L	1 1/2	2600	3 1/2 x 5 1/2	36x3 1/2	W							Wolverine, J	2	2640	3 1/2 x 5	34x4	34x7	I	
Wichita, M	2	2800	3 1/2 x 5 1/2	36x3 1/2	W							Wolverine, J	2 1/2	3425	4 1/2 x 5 1/2	36x5	36x10	I	
Wichita, R	2 1/2	3000	3 1/2 x 5 1/2	36x4	W							Wolverine, L	3 1/2	4100	4 1/2 x 5 1/2	36x5	36x10	I	
Wichita, RX	2 1/2	3600	4 1/2 x 6	36x4	W							Yellow Cab, M21	1 1/2	2050	3 1/2 x 5	32x4	32x4	B	
Wichita, O	3 1/2	4000	4 1/2 x 6	36x5	W							Yellow Cab, M41	1 1/2	2350	3 1/2 x 5	34x4 1/2	34x4 1/2	W	

*2-cyl. †6-cyl. ‡8-cyl. All others, not marked, are 4-cyl.

Trac., Tractor. **Canadian made.

Final Drive: W—Worm, I—Internal Gear, C—Chains, D—Double Reduction, B—Bevel, 4—Four-Wheel, E—External Gear. †Tires—optional. ‡Pneumatic Tires. All others solid.

††Price includes body. \$—Price includes several items of equipment.

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Farm Tractor Specifications and Prices

TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinder, Bore, Stroke	Fuel	Flow Capacity	TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinder, Bore, Stroke	Fuel	Flow Capacity	TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinder, Bore, Stroke	Fuel	Flow Capacity		
Alb-In One	16-30	\$1975	3	Clim.	4-5 x 6 1/2	GDK	3-4	G-O	14-28	\$1485	4	Wauk.	4-4 1/2 x 5 1/2	G or K	3	Port Huron, A	12-25	\$1700	4	Chief	4-3 1/2 x 6	G, K	3		
Alb-Chalm. B	6-12	925	2	LeR.	4-3 1/2 x 5 1/2	Gas.	1	Grain Belt, A	18-36	2150	4	Wauk.	4-4 1/2 x 5 1/2	G or K	4	Prairie Dog, L	9-18	650	3	Wauk.	4-3 1/2 x 5 1/2	Gas.	2		
Alb-Chalm. G, P	6-12	850	2	LeR.	4-3 1/2 x 5 1/2	Gas.	1-2	Gray	18-36	2000	3	Wauk.	4-4 1/2 x 5 1/2	Gas.	4	Prairie Dog, D	15-30	1250	4	Wauk.	4-4 1/2 x 5 1/2	Gas.	3		
Alb-Chalm. L	12-20	1495	2	Midw.	4-4 1/2 x 5 1/2	Gas.	2-3	Ground Hog	19-31	2000	4	Erd.	4-4 x 6	G or K	3	Ranger Club									
Alb-Chalm. M	13-30	2150	4	Own	4-4 1/2 x 6 1/2	G or K	3-4	Gt. Western St.	20-30	1950	4	Beav.	4-4 x 6	K	4	T-20	8-16		4	LeR.	4-3 1/2 x 4 1/2	Gas.	1		
Alb-Chalm. N	10-18	875	4	Own	4-4 1/2 x 5 1/2	G, K	4	Hart-Parr, 20	20	995	4	Own	2-5 1/2 x 6 1/2	K, D.	2	Reed	A-15	1985	4	Wauk.	4-4 1/2 x 6 1/2	G or K	3-4		
Alb-Chalm. O	11-23	1875	4	Own	4-4 1/2 x 6	G or K	3	Hart-Parr, 30	30	1595	4	Own	2-6 1/2 x 7	K, D.	3	Reed	A-18	2185	4	Wauk.	4-5 x 6 1/2	Gas.	4		
Alb-Chalm. P	11-23	1675	4	Own	4-5 x 6	G or K	3	Heider	9-16	1170	4	Wauk.	4-4 1/2 x 5 1/2	G, K	2	Reliable	10-20	885	4	Own	2-6 x 7	Ker.	2		
Alb-Chalm. Q	13-33	2500	4	Clim.	4-5 x 6 1/2	G or K	4	Heider	12-20	1395	4	Wauk.	4-4 1/2 x 6 1/2	G, K	3	Rex	12-25	1600	4	Wauk.	4-4 1/2 x 5 1/2	G or K	3		
Alb-Chalm. R	12-20	1530	4	Buda	4-4 1/2 x 5 1/2	G, K	2-3	Heider	6-10	1050	4	LeR.	4-3 1/2 x 4 1/2	Gas.	1	Russell	12-24	1500	4	Own	4-4 1/2 x 5 1/2	G or K	2-3		
Alb-Chalm. S	3-5	550	4	Clim.	1-4 1/2 x 5	Gas.	1	Hicks	20-30		4	LeR.	4-4 1/2 x 6	K or G	4	Russell	15-30	2200	4	Own	4-5 x 6 1/2	G or K	3-4		
Alb-Chalm. T	15-33	2200	4	Clim.	4-5 x 6 1/2	G, K	4	Huber Light 4	12-25	1185	4	Wauk.	4-4 1/2 x 5 1/2	G or K	3	Russell	20-35	3000	4	Own	4-5 1/2 x 7	G or K	4-5		
Alb-Chalm. U	22-35	3350	4	Own	4-5 1/2 x 8	G, K	6	Huber Super 4	15-30	1885	4	Midw.	4-4 1/2 x 6	Gas.	3	Russell	30-60	5000	4	Own	4-8 x 10	G or K	6-10		
Alb-Chalm. V	30-60	5000	4	Own	4-7 x 9	G, K, D	8	Illinois, Super								Samson			4	Own	4-4 x 5 1/2	G, K	2		
Alb-Chalm. W	12-21	1785	4	Herc.	4-4 x 5	Gas.	2-3	Drive	18-36	2375	4	Clim.	4-5 x 6 1/2	G, K	4	Sandusky, J	10-20	1250	4	Own	4-4 1/2 x 5 1/2	G, K, D	2		
Alb-Chalm. X	6-10		4	Own	4-3 x 4	G, K	4	Imperial	40-70	5000	4	Own	4-7 1/2 x 9	G, K, D	10	Sandusky, J	15-35	1750	4	Own	4-5 x 6 1/2	G, K, D	4		
Alb-Chalm. Y			3	Own	6-3 x 4	G, K	4	Indiana	5-10	895	2	LeR.	4-3 1/2 x 5 1/2	Gas.	1-2	Shawnee Com.	6-12		2	LeR.	4-3 1/2 x 4 1/2	Gas.	10		
Alb-Chalm. Z	6-10		4	Own	4-3 x 4	G, K	2	International	8-16	900	4	Own	4-4 1/2 x 5	G, K, D	2	Shawnee Com.	9-18		2	Gray	1-3 1/2 x 5				
Alb-Chalm. AA			4	Own	6-3 x 4	G, K	4	International	15-30	1750	4	Own	4-5 1/2 x 6	G, K, D	4	Shelby	15-30		4	Beav.	1-4 1/2 x 6	G, K	3		
Alb-Chalm. AB	8-16		4	Own	2-5 1/2 x 6	G, K, D	2-3	J-T	20-40	3485	2	Chief	4-4 1/2 x 6	G, K, D	3-4	Shelby	10-20		4	Erd.	1-4 x 6	G or K	2-3		
Alb-Chalm. AC	12-20		4	Own	4-4 1/2 x 6	G, K, D	2-3	Klumb	16-32	1650	4	Clim.	4-5 x 6 1/2		4	Short Turn	20-40	1500	3	Beav.	1-4 1/2 x 6	G, K	3		
Alb-Chalm. AD	12-25		4	Own	2-6 1/2 x 7	G, K, D	3-4	Knoedsen 1720	25-45	2550	4	Own	4-5 x 9	Gas.	4-6	Square T	18-35	2075	3	Clim.	1-5 x 6 1/2	G, K	3		
Alb-Chalm. AE	14-28		4	Own	4-4 1/2 x 7	G, K, D	3-4	LaCrosse	6-12	650	4	Own	2-4 x 6	G, K	1	Steady Pull	12-24	1455	4		1-4 x 5	Gas.	3		
Alb-Chalm. AF	18-36		4	Own	4-5 1/2 x 8	G, K, D	4-5	LaCrosse	12-24	985	4	Own	2-6 x 7	G or K	3	Stinson	18-36	1835	4	Beav.	1-4 1/2 x 6	G, K	4		
Alb-Chalm. AG	25-60		4	Own	4-6 1/2 x 7	G, K, D	4-6	LaCrosse	12-25	1495	4	Midw.	4-4 1/2 x 6 1/2	Gas.	3	Stone	20-40	2250	4	Beav.	1-4 1/2 x 6	G, K	4		
Alb-Chalm. AH	45-65		4	Own	4-7 1/2 x 8	G, K, D	8-10	LaCrosse	15-25	1685	4	Beav.	4-4 1/2 x 6	G or K	3-4	Tiegs	15-27	2625	4	Wisc.	1-4 1/2 x 6	Gas.	3-4		
Alb-Chalm. AI	15-25		4	Own	4-4 1/2 x 6	Ker.	3	Lauson	15-30	2225	4	Beav.	4-4 1/2 x 6	G or K	3-4	Titan	10-20	900	4	Own	2-6 1/2 x 8	G, K, D	3		
Alb-Chalm. AJ	15-25		4	Midw.	4-4 1/2 x 5 1/2	Gas.	3	Lauson Read	15-30	2225	4	Beav.	4-4 1/2 x 6	K	3-4	Topp	30-45	3500	4	Wauk.	1-4 1/2 x 6 1/2	Gas.	3-4		
Alb-Chalm. AK	18-25		4	Midw.	4-4 1/2 x 5 1/2	Gas.	3	Leader	12-18	1095	4	Own	2-6 x 6 1/2	G, K, D	2-3	Tore Cultivator	6-10		3	LeR.	1-3 1/2 x 4 1/2	Gas.	2		
Alb-Chalm. AL	25-35		4	Midw.	4-4 1/2 x 6	Gas.	com.	Leader	16-32	1985	4	Clim.	4-5 x 6 1/2	G, K	3-4	Townsend	10-20	895	2	Own	1-6 1/2 x 7	Ker.	2-3		
Alb-Chalm. AM	8-16		4	Own	4-3 1/2 x 4 1/2	G, K	2-3	Leader	18-35	2775	2	Clim.	4-5 x 6 1/2	G, K	3-4	Townsend	15-30	1485	2	Own	4-7 x 8	Ker.	3-4		
Alb-Chalm. AN	2-4	315	4	Own	1-3 1/2 x 4 1/2	G, K	2	Leonard	20-30	2530	4	Buda	4-4 1/2 x 6	G, K	3	Townsend	25-50	2750	2	Own	1-8 1/2 x 10	Ker.	4-6		
Alb-Chalm. AO	30		4	Own	4-4 1/2 x 6 1/2	G, K, D	4	Liberty	18-32	2475	4	Clim.	4-5 x 6 1/2	G, K	4	Traction Motor	40-60		4	Own	3-3 1/2 x 5	Gas.	4-6		
Alb-Chalm. AP	60		4	Own	4-6 1/2 x 8 1/2	G, K, D	8-9	Linn	40	4500	4	Cont.	4-4 1/2 x 5 1/2	Gas.	4	Traylor	6-12	715	4	LeR.	1-3 1/2 x 4 1/2	Gas.	1-2		
Alb-Chalm. AQ	1850		3	Wauk.	4-4 1/2 x 6 1/2	G or K	2	Linn	60	5100	4	Wauk.	4-5 x 6 1/2	Gas.	6	Triumph	18-36	2450	4	Erd.	1-4 1/2 x 6	Ker.	4		
Alb-Chalm. AR	15-30	1650	4	Own	2-6 1/2 x 7	Ker.	3-1	Little Giant	16-22	2200	4	Own	4-4 1/2 x 6	K	4	Trumdar	10	3750	2	Wauk.	1-5 x 6 1/2	G or K	4		
Alb-Chalm. AS	15-30	1000	2	Own	4-4 1/2 x 6	Gas.	3	Little Giant	20-35	3300	4	Own	4-5 1/2 x 6	K	4	Turner	14-25	1295	4	Buda	1-4 1/2 x 5 1/2	G, K	3		
Alb-Chalm. AT	10-18	800	4	Own	4-3 1/2 x 5	G or K	2	Lombard	85-150		2	Own	6-6 1/2 x 6 1/2	Gas.	16	Twin City	12-20	1580	4	Own	4-4 1/2 x 6	G, K	3		
Alb-Chalm. AU	15-27	1890	4	Own	4-4 1/2 x 6	G or K	3	Lombard	50		2	Own	4-4 1/2 x 6 1/2	Gas.	10-13	Twin City	20-35	3175	4	Own	5-5 1/2 x 6 1/2	G, K	5		
Alb-Chalm. AV	22-40	3100	4	Own	4-5 1/2 x 6 1/2	G or K	4-5	Magnet	14-28	1875	4	Wauk.	4-4 1/2 x 6 1/2	K & G	3	Twin City	40-65	5250	4	Own	7-7 1/2 x 9	G, K	8		
Alb-Chalm. T11	25	4250	2	Own	4-4 1/2 x 6	Gas.	4	Master Jr.	5-10	1855		LeR.	2-2 1/2 x 4	Gas.	1	Uncle Sam C20	12-20	1385	4	Weid.	1-4 x 5 1/2	G	2-3		
Alb-Chalm. T15	40	6500	3	Own	4-6 1/2 x 7	Gas.	1-9	MerryGar1921	2	230	2	Evin	1-2 1/2 x 2 1/2	Gas.	1	Uncle Sam B19	20-30	2300	4	Beav.	1-4 1/2 x 6	G or K	3-4		
Alb-Chalm. Contaw	5-2 1/2	455	2	NWay	4-4 1/2 x 6 1/2	G or K	1-9	Minne. All-P	12-25	1200	4	Own	4-4 1/2 x 7	G or K	3	Uncle Sam D21	20-30	1985	4	Beav.	1-4 1/2 x 6	G or K	3-4		
Alb-Chalm. Chase	12-25	1725	3	Buda	4-4 1/2 x 5 1/2	G or K	2-3	Minne. Gen.P	17-30	1850	4	Own	4-4 1/2 x 7	G or K	3-4	Universal	1-4	475	2	Own	1-3 1/2 x 5	G	1		
Alb-Chalm. Chicago	40	40	4	Own	4-1 1/2 x 6	Gas.	4	Minne.								Utiliter	501	380	4	Own	1-3 1/2 x 4 1/2	G	1		
Alb-Chalm. Cistec.	F	9-16	845	Own	4-3 1/2 x 4 1/2	G, K, D	2-3	Med.Duty	22-44	3300	4	Own	4-6 x 7	G or K	5-6	Valie. Bitwulf	12-24	1750	4	Own	4-4 1/2 x 6 1/2	G, K, D	8		
Alb-Chalm. Cistec.	W	12-20	1495	Own	4-4 x 5 1/2	G, K, D	2-3	Minne.								Victory	1921	9-18	1350	4	Gray	4-3 1/2 x 5	G, K	2	
Alb-Chalm. Dakota	A	15-27	1750	Dom.	4-4 1/2 x 6	Gas.	3	HeavyDuty	35-70	4800	4	Own	4-7 1/2 x 9	G or K	8-9	Victory	1921	15-30	1750	4	Wauk.	4-4 1/2 x 5 1/2	G, K	3	
Alb-Chalm. DArt.	B, J.	15-30	2100	Buda	4-4 1/2 x 6	Gas.	3-4	Mohawk 1921	8-16	765	2	Light	4-3 1/2 x 4 1/2	G or K	1-2	Victory	1921	15-30	1750	4	Wauk.	4-4 1/2 x 5 1/2	G, K	3	
Alb-Chalm. Depue	A	20-30	2500	Buda	4-4 1/2 x 6	Gas.	3	Moline Univ D	9-18	990	2	Own	4-3 1/2 x 5	Gas.	2-3	Wallie	K	15-25	1600	4	Own	4-4 1/2 x 6 1/2	G, K	3	
Alb-Chalm. Dell	D	20	2180	Cont.	4-4 1/2 x 5 1/2	Gas.	3	Moline Orch.	9-18	1075	2	Own	4-3 1/2 x 5	Gas.	2-3	Waterloo	N	12-25	1450	4	Own	2-6 1/2 x 7	G, K	3	
Alb-Chalm. Dell	R, W.	20	2980	Midw.	4-4 1/2 x 6	Gas.	3	Motor Macauli	1 1/2	195	2	Own	1-2 1/2 x 3 1/2	Gas.	1	Webfoot	53	28-53	5000	2	Wisc.	4-5 1/2 x 7	G, D	6	
Alb-Chalm. Do-It-All	-7	535		Own	1-1 1/2 x 5	Gas.	4	Metex	15-30	2250	4	Buda	4-4 1/2 x 6	Gas.	3-4	Wellington B	12-22			4	Erd.	4-4 x 6	Ker.	2-3	
Alb-Chalm. Eagle	F	12-22	1100	Own	2-7 x 8	G or K	3-5	NB	1	3-5	425	4	Own	2-3 1/2 x 4	Gas.	3	Wellington F	16-30			4	Chief	4-4 1/2 x 6	Ker.	3-4
Alb-Chalm. E-3	AA	16-30	1850	Own	2-8 x 8	G or K	4-5	NB	2	3-5	425	4	Own	2-3 1/2 x 4	Gas.	3	Western, 1920	16-32	2100	4	Chief	4-5 x 6 1/2	Gas.	4	
Alb-Chalm. E-5	AA	12-20	1445	Own	4-4 1/2 x 5	J, K, D	3	Nichols	20-42	3100	4	Own	8 x 10	G or K	3-6	Wetmore	12-25	1650	4	Wauk.	4-4 x 5 1/2	G, K	3		
Alb-Chalm. E-8	Q	12-20	925	Own	4-4 1/2 x 5	J, K, D	3	Nichols	20-42	3100	4	Own	8 x 10	G or K	3-6	Wharten	12-20	1800	3	Buda	4-4 1/2 x 5 1/2	Gas.	2		
Alb-Chalm. E-8	Q	16-32	2000	Own	4-5 1/2 x 7	G, K, D	4	Nichols	20-42	3100	4	Own	8 x 10	G or K	3-6	Whitney	9-18		4	Own	2-5 1/2 x 6 1/2	Gas.	2		
Alb-Chalm. Evans	18-30	2000	4	Own	4-4 1/2 x 6	G, K	3	Nichols	20-42	3100	4	Own	8 x 10	G or K	3-6	Wichita	15-30	2000	4	Beav.	4-4 1/2 x 6	G, K, D	3-4		
Alb-Chalm.																									

